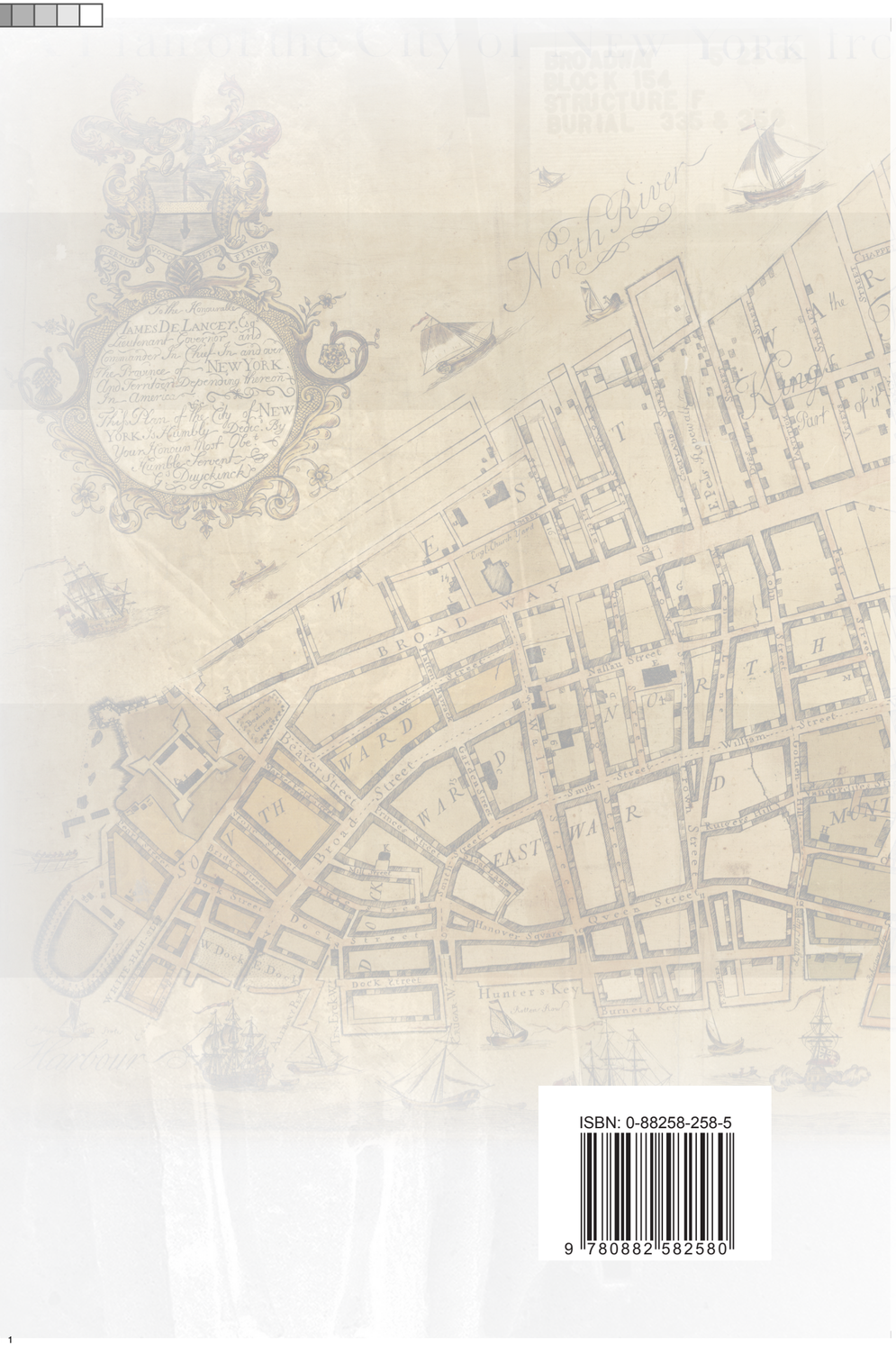

ISBN: 0-88258-258-5

THE NEW YORK AFRICAN BURIAL GROUND

VOL. 4

The Skeletal Biology, Archaeology and History of the New York African Burial Ground: *A Synthesis of Volumes 1, 2, and 3*

Prepared by Statistical Research, Inc.

GSA

HOWARD UNIVERSITY

U.S. General Services Administration

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Unearthing the African Presence in Colonial New York

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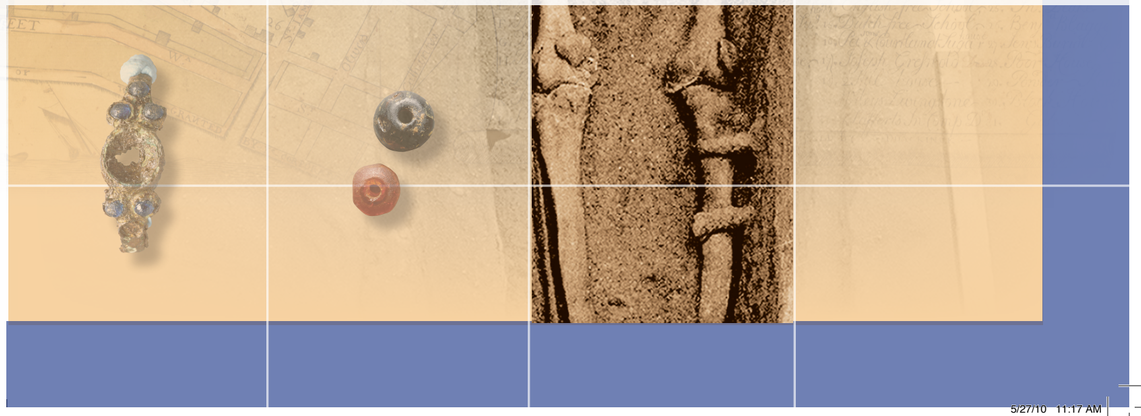

HUABG-V4-Synthesis-0510.indd 1 5/27/10 11:17 AM

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HOWARD UNIVERSITY PRESS
WASHINGTON, D.C.
2009

Published in association with the United States General Services Administration

The content of this report is derived primarily from Volumes 1, 2, and 3 of the series,
The New York African Burial Ground: Unearthing the African Presence in Colonial New York.

Application has been filed for Library of Congress registration.

Any opinions, findings, and conclusions or recommendations
expressed in this material are those of the authors and do
not necessarily reflect the views of the U.S. General Services
Administration or Howard University.

Published by Howard University Press
2225 Georgia Avenue NW, Suite 720
Washington, D.C. 20059
18 17 16 15 14 13 12 11 10 09 1 2 3 4 5
ISBN 0-88258-258-5
978-0-88258-258-0

Howard University's New York African Burial Ground Project
was funded by the U.S. General Services Administration under
Contract No. GS-02P-93-CUC-0071

Report preparation by Statistical Research, Inc., Michael Heilen.
Layout and design by Simpson & Convent.

Typeset and printed in the United States of America.
Printed on acid-free paper.

Cover Images:

Detail of the Maerschalk Plan (Francis Maerschalk, 1754)

Artifacts from the New York African Burial Ground (Photographs by Jon Abbott):

Enameled cuff link face, Burial 371, Catalog No. 1875-B.001.
Bead Type 12, Burial 340, Catalog No. 01651-B.79.
Oval turquoise enamel face, Burial 211, Catalog No. 1186 -B.001.
Pins, Burial 12, Catalog Nos. 253-B.001, .002.
Ring, copper alloy with glass insets, Burial 310, Catalog No. 1486-B.001.
Bead Type 9, Burial 340, Catalog No. 01651-B.78.
Bead Type 15, Burial 340, Catalog No. 01651-B.75.
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Burial 335 (Photograph by Dennis Seckler)

Cover design by Star Bullock + Associates, Mark A. Bartley

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Foreword

In 1991 during the excavation phase for the construction of the Federal Building now seen at 290 Broadway, New York City, a cemetery was uncovered containing human remains of Africans—most were enslaved, some free—who existed, worked, and died under inhumane conditions in colonial New York. This discovery, the largest bioarchaeological site of its kind, sparked heightened public awareness of African heritage in the northern states of colonial America. An outcome of this awareness was the public's desire for amending and correcting the history of Colonial New York during that period to reflect more accurately the lives and culture of these forgotten Africans and people of African descent, and their contributions and roles in economic development. Several initiatives, supported by the General Services Administration on behalf of the American people, were launched to accomplish this goal.

Following the excavation of the site, the initiative to conduct historical and scientific studies of the remains and artifacts was entrusted to Howard University. There, Dr. Michael L. Blakey, now at the College of William and Mary, designed and implemented a comprehensive, interdisciplinary research program—the New York African Burial Ground Project—to address questions in three main areas: history, archaeology, and skeletal biology. As scientific director of the project, he assembled an international team of scholars, professionals, graduate and undergraduate students, technical staff members, and cultural specialists for various parts of the study.

The New York African Burial Ground: Unearthing the African Presence in Colonial New York serves as the culminating work of this project, reporting the research findings. This multivolume series covers broadly a contextualized historical perspective, details the archaeological discoveries, and contains descriptions of the skeletal biology of the unearthed human remains. The first three volumes document and validate the lives of African Americans ancestors who lived and worked in Colonial New York. This volume, which was prepared by Statistical Research, Inc., is intended to be a cohesive synthesis of the findings of the African Burial Ground Project researchers.

O. Jackson Cole, Ph.D.
Howard University Executive-in-Charge of the African Burial Ground Project

James A. Donaldson, Ph.D.
Dean
Howard University College of Arts and Sciences

Editorial Method

For the sake of consistency and because this was primarily an archaeological project, this volume of the series *The New York African Burial Ground: Unearthing the African Presence in Colonial New York* was edited according to the conventions of the following style manuals: the style guide of the Society for American Archaeology and *The Chicago Manual of Style*, 15th edition.

Acknowledgments

The Skeletal Biology, Archaeology and History of the New York African Burial Ground: A Synthesis of Volumes 1, 2, and 3 is derived primarily from:

- Volume 1. *The Skeletal Biology of the New York African Burial Ground*, Michael Blakey and Lesley Rankin-Hill, editors
- Volume 2. *The Archaeology of the New York African Burial Ground*, Warren Perry, Jean Howson, and Barbara A. Bianco, editors
- Volume 3. *Historical Perspectives of the African Burial Ground*, Edna Greene Medford, editor

Statistical Research, Inc., prepared this volume for Howard University. Dr. Michael Heilen played the leading role in its preparation, with contributions by three other SRI employees, Dr. Stephanie Whittlesey, Dr. David Palmer, and Maria Molina, MFA.

An Advisory Review Board, which comprised three specialists from each of the three African Burial Ground research components: skeletal biology, archaeology, and history, was selected by Howard University and General Services Administration. Advisory Review Board members Dr. Anne L. Grauer, Dr. Thomas J. Davis, and Dr. Theresa Singleton comprised the subpanel that read an early draft of this report and provided comments and recommendations to Howard University for its improvement.

O. Jackson Cole, Ph.D.
Howard University Executive-in-Charge of the African Burial Ground Project

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Chapter 1
Introduction

The African Burial Ground, located in New York City in Lower Manhattan, was used during the seventeenth and eighteenth centuries by Africans and African Americans for the burial and memorialization of their loved ones. Forgotten for nearly two centuries, the burial ground was rediscovered in 1991 during archaeological excavation at 290 Broadway, and the individuals recovered from the excavated portion were eventually studied by a team of researchers assembled by Howard University. Research conducted for the New York African Burial Ground Project is vast and far reaching, not only because of what was discovered—the largest sample in the Americas of a colonial African American burial population—but because of the kinds of questions that were asked, how those questions were developed, and how researchers attempted to answer research questions. As such, the New York African Burial Ground Project is one of the most important projects in archaeology today (Blakey 2009a).

The researchers' sophisticated interdisciplinary approach to studying the New York African Burial Ground resulted in an unprecedented volume of significant findings on the origins, identities, and daily lives of enslaved Africans in New York. The biological, anthropological, and historical research reveals a rich history of the contributions, struggles, and accomplishments of Africans and African Americans in seventeenth- and eighteenth-century New York that until recently was not widely recognized or acknowledged. New insights continue to be developed as researchers continue to address the many questions raised by the research. This volume brings together the findings of Howard University's research, directed by Dr. Michael Blakey, in the skeletal biology, archaeology, and history of the New York African Burial Ground. Each of the components of the African Burial Ground research is presented in one of three technical report volumes—Volume 1, *Skeletal Biology of the African Burial Ground* (Blakey and Rankin-Hill, eds. 2009); Volume 2, *The Archaeology of the New York African Burial Ground* (Perry, Howson, and Bianco, eds. 2009a); and Volume 3, *Historical Perspectives of the African Burial Ground: New York Blacks and the Diaspora* (Medford, ed. 2009). All four volumes are available online and as published volumes in the series *The African Burial Ground: Unearthing the African Presence in Colonial New York.* The material presented in this volume is drawn primarily from the technical volumes. In some cases, additional material from published reports, peer-reviewed literature, and project databases is provided.

This volume is intended to be a cohesive synthesis of the New York African Burial Ground Project research as conducted by the Howard University scientific research team; John Milner Associates, Inc.; and members of the African Burial Ground descendant community. Its intended audience is the professional scientific community. The goal for this volume is that the Project research findings can be used to inform further investigations of the New York African Burial Ground and similar sites; to add to the growing body of information on sites associated with the African Diaspora; and to inspire future research in the archaeology, biology, and history of the African Diaspora. It is recognized that readers may or may not possess specific technical expertise in the many analyses conducted for the New York African Burial Ground research. A general report will be written for a wider public audience as part of this series.

The portion of the African Burial Ground that was studied—located at 290 Broadway—was excavated under contract with the GSA between May 1991 and October 1992 in order to fulfill legal requirements under the National Historic Preservation Act of

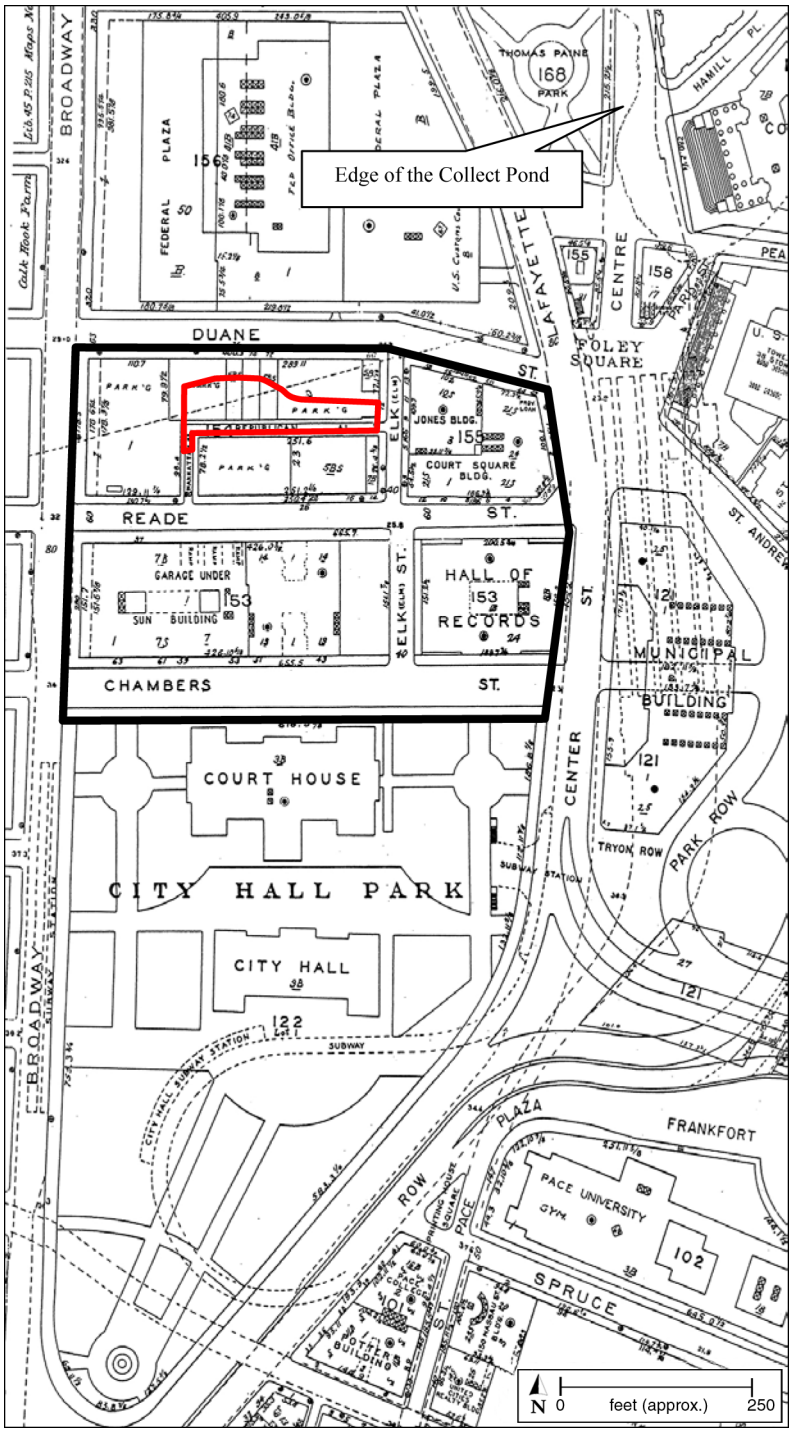


Figure 1. Sanborn Map (Manhattan Land Book 1984-85) of New York's civic center area, encompassing the historic African Burial Ground at the time of the initial cultural resources investigation in 1989. Most of Block 154, bounded by Broadway and Duane, Reade, and Elk Streets, was covered by parking lots. The map shows the historic "Calk Hook Farm" (labeled in upper left corner) and its southern boundary running diagonally from Broadway across the block. The historic edge of the Collect Pond is shown at the upper right. The small portion of the cemetery that was excavated in 1991–1992 is outlined with a red line within the boundary of the African Burial Ground National Historic Landmark (outlined with a thick black line). New York City's designated "African Burial Ground and the Commons Historic District" encompasses a larger area that includes all of City Hall Park as well as Foley Square (use of 1984-85 Sanborn Map 290 Broadway, New York, NY, reprinted/used with permission from the Sanborn Library, LLC) (from Volume 2, Part 1 [Howson, Bianchi, and Perry 2009:Figure 28]).

1966, as amended for the investigation, protection, and management of cultural resources. For this series, the archaeological site investigated during this project is referred to as the "New York African Burial Ground." The larger burial ground, of which the archaeological site is a part, is referred to as the African Burial Ground. The remains of more than 400 individuals, many of them enslaved Africans, were recovered during excavation of the New York African Burial Ground and analyzed at Howard University under the expert care of Scientific Director Dr. Michael Blakey and W. Montague Cobb Biological Anthropology Laboratory Director Mark Mack.

Artifacts and other materials collected from the site were analyzed in the World Trade Center at laboratory facilities provided by the GSA in the U.S. Customs House. The remains of individuals, associated grave goods, and related materials were investigated by a diverse team of experienced researchers—many of them experts in African Diaspora studies and leaders in their respective disciplines—who were affiliated with multiple institutions and organizations, including Howard University and John Milner Associates, Inc. The recovered individuals and associated materials were reinterred and memorialized during a sacred ceremony at the New York African Burial Ground in October 2003, once analysis of individual remains and associated grave goods was complete. The African Burial Ground was designated a New York City Landmark and a National Historic Landmark in 1993, and in 2006, the portion of the burial ground that was excavated and analyzed as part of this project was designated a National Monument (Figure 1). A memorial was completed in September 2007, and construction of an interpretive center at the site is underway. In October 2009, the National Park Service assumed stewardship of the site.

Perceptions about the project depend on what part of the project is considered and the audience, either public or private, considering it. Some aspects of the project, particularly those involving initial GSA actions, were considered insensitive and ignorant acts of desecration. Other aspects of the research, such as those that were developed by Howard University and John Milner Associates, Inc., are considered groundbreaking and innovative although somewhat controversial (see Chapter 2). To some archaeologists, the project is a model of community involvement and innovative research (Epperson 2004). To others, aspects of the project represent what not to do (McCarthy 1996). As Blakey (2009a:11) states in the skeletal biology volume, however,

> The research team's combination of academic and contract archaeology departs from previous contract work and represents a particular trajectory in the practice of anthropology that is necessarily critical of previously acceptable standards. The New York African Burial Ground Project's alternative approaches seek to represent new and better standards of anthropological practice. . . .[T]he team encountered many colleagues who were either strongly opposed or strongly in favor of its approach. The team asserts that its alternative approach enhances the scientific rigor, humanistic meaning, and societal significance of New York's African Burial Ground research.

Content and Organization

The content of this volume is derived primarily from the work of the project researchers and was prepared by Statistical Research, Inc. This volume is organized primarily around the themes developed in consultation with the descendant community at the outset of the analyses conducted by Howard University: origins, identity, transformations, and resistance. Additional material not provided in the technical reports has been provided to amplify and contextualize the research findings, but every effort has been made to maintain the integrity and direction of the original research. It must be recognized, however, that many aspects of the New York African Burial Ground Project were unprecedented. The very presence of a burial ground for Africans enslaved in colonial New York has defied common misconceptions about the scope of slavery in the United States and revealed the reality about the trade in enslaved Africans. The research conducted at the New York African Burial Ground was groundbreaking in its intent and content. The research team's objective, as the series title states, was to reveal a population defined not by race but by origins, not by enslavement but by the assertion of their dignity. To meet this objective, accepted versions of history had to be examined critically to uncover the contributions of a heretofore unacknowledged African population. A biocultural approach was adopted by the skeletal biology researchers to ensure that social, historical,

and cultural information would be used along with biological evidence to evaluate the origins and life experiences of the individuals interred at the burial ground.

Subsequent to the development of the themes included in the research design and initial public engagement, the perspective of the researchers has evolved, particularly through periodic African Burial Ground updates and regular Sankofa conferences, which they convened during the course of the research project. For instance, in the late 1990s, the New York African Burial Ground researchers began to question the appropriateness of focusing too heavily on resistance, asserting that models of domination and resistance tend to frame interactions and behaviors according to dyadic, oppositional interactions. They ultimately concluded that many activities of the New York African population cannot be described adequately as acts of domination or resistance when the interactions involved were far more complex. Models of domination and resistance, they noted, give the impression that the behaviors and identity of enslaved Africans were simply a reaction to domination. As the project evolved, the researchers came to assert an alternate view: that rather than reacting to domination, the Africans in Colonial and Federal period New York were instead asserting and maintaining something that was fundamentally their own—their human dignity.

This point of view thus became the thrust of the history and archaeology volumes of this series. Those volumes seek to establish that countless activities—such as the pursuit of family life, the development of African American institutions, the struggle for rights and freedom, and the performance of proper burial rituals—along with different kinds of resistance, reflect persistent efforts among the enslaved and free Africans of New York and throughout the African Diaspora to assert and maintain their human dignity. The preservation of human dignity was not a response to domination, these volumes assert, but a fundamental aspect of life that enslaved and free Africans in colonial New York fought to retain despite efforts to control and oppress Africans and African Americans.

This example illustrates how the development and application of new method and theory and the long time frame of the project have resulted in the evolution of perspectives, themes, and approaches over the course of the project. As a result of the ongoing discussions among the researchers, their perspectives as well as the nature of some findings changed over time. New developments and new interpretations of the data have emerged. An invited presidential session presenting the final analysis was delivered at the 2006 American Anthropological Association meetings, for instance. In some cases, new information or interpretive schemes could potentially contradict or modify the results presented here or the technical volumes. Attempts to incorporate disciplinary changes in perspective as well as new published information are made in this volume when possible. In most cases, however, the information presented in this volume is based on that presented in the revised versions of the skeletal biology, history, and archaeology volumes in this series, published in 2009. The original versions of the skeletal biology and history volumes were first posted on the Web in 2004, and the archaeology volume, in 2006.

This volume is organized around the major research themes suggested by the descendant community and presented in the research design. Chapters are organized in three sections that present background, findings, and discussions of significance. The first section of the volume (Chapters 1–3) presents general background information on the site, project history, methods, historic context, and theoretical frameworks. The second section (Chapters 4–8) provides detailed discussion of studies in history, archaeology, and bioarchaeology as they pertain to origins and identity, daily life, the assertion and maintenance of human dignity, and religious practice. The third section (Chapter 9) discusses the significance of the New York African Burial Ground research to African Diaspora studies, the discipline of archaeology, the nation, and the world.

Chapter 1 introduces the site and its investigation and provides basic information on the volume and volume organization. Chapter 2 provides information on project history, including how the site came to be discovered and excavated; field methods; laboratory methods; reinterment; and the disposition of excavated materials that were not reinterred. Chapter 3 provides basic historical information on the deep involvement of New York in slavery and the transatlantic trade in enslaved Africans, the use and development of the African Burial Ground, and the archaeology of enslaved Africans in New York. The presentation of this information provides a much-needed context for understanding the formation of the African Burial Ground, particularly in light of the fact that slavery in New York and other northern colonies is often forgotten, denied, downplayed, or overlooked in the

popular consciousness. The effect of this misrepresentation is that "northern slavery and racism were denied" (La Roche and Blakey 1997:90). The African Burial Ground is powerful evidence that contradicts popular understandings.

Chapter 4 provides information on the diverse origins and identities of Africans interred at the African Burial Ground as can be determined from the historical, archaeological, and skeletal evidence presented in the three technical volumes in this series. The chapter pays particular attention to specific regions in Africa from which enslaved Africans originated, how enslaved Africans were forcibly migrated to New York and other colonies, and how the diverse origins of enslaved Africans guided the formation of complex diasporic identities in the Americas. Chapters 5, 6, and 7 document the contours of daily life for enslaved and free Africans and African Americans. The New York African Burial Ground Project researchers focused a tremendous amount of research and generated many findings on these topics. Their research provides important information on the life histories and experiences of diasporic Africans buried in Lower Manhattan. In combination with historical and archaeological information, bioarchaeological data developed by the researchers provides important new data on the effects of enslavement on the health status of Africans and African Americans in New York.

Chapter 5 discusses how diet, disease, and environment affected the daily lives of individuals interred at the African Burial Ground. Conditions in Africa, the West Indies, and New York are examined. Chapter 6 discusses differences and similarities in labor experiences, family life, and demography in Africa, the Caribbean, and New York. Historical information is compared to data on skeletal indicators of work and demonstrates that enslaved Africans in Manhattan were subject to hard labor at young ages. Basic aspects of family life in New York are contrasted with family life and kinship in Africa in order to understand how oppression and enslavement affected fertility, childcare, and mortality. Information discussed in Chapters 5 and 6 is then used to interpret historical and bioarchaeological information on demographic trends in survivorship and mortality.

Chapter 7 discusses how diasporic Africans and African Americans in Colonial (1624–1775) and early Federal period (1776–1827) New York asserted and maintained their human dignity. Historical information is used to discuss European and Euroamerican efforts at domination and control and the strategies that enslaved and free Africans and African Americans used to assert their basic right to human dignity. Because modes of resistance were identified as a major theme, particular attention is focused on strategies of resistance as sets of strategies for asserting and preserving human dignity. Chapter 8 discusses how belief, spirituality, and sacrality are manifest in the burial practices performed at the African Burial Ground. Historical and anthropological information on ideology and belief systems, grave goods, body practices, spatial relationships, and relative dating of burials are used to infer mortuary practices at the African Burial Ground and their relationship to conditions in New York. In combination with historical and bioarchaeological information from the history and skeletal biology volumes in this series, interpretation of archaeological evidence makes clear that most of the individuals interred were provided standardized, "proper" burials (Perry, Howson, and Bianco 2009:371). To the researchers, homogeneity in mortuary practices suggests that "black New Yorkers may have arrived at a provisional consensus about how to deal with death" (Perry, Howson, and Bianco 2009:371).

Chapter 9 examines the significance of the New York African Burial Ground to multiple disciplines, many publics, the nation, and, in fact, the world.

Research Context

Since the New York African Burial Ground was discovered, there has been a surge in historical and anthropological scholarship on the African Diaspora; the transatlantic trade in enslaved Africans; the emergence of the Atlantic World; race, racism, and racialization; and the economic and cultural foundations of slavery in different Atlantic contexts including New York City. As a result, perspectives on these complex historical issues are in a constant state of change and revision. The models of decades past are being replaced by newer models, many of which question the validity of earlier assumptions and conclusions.

The historical literature on the political economy of slavery and slaving in the Atlantic World is vast. This volume does not attempt to cover or summarize the tremendous headway that has been made since the early 1990s. The advances and amendments of recent historical scholarship are still fresh, and there is no real consensus on many issues. Nonetheless, it will

highlight a few important trends that transformed how research in those fields is conducted and how scholars attempt to answer current research questions.

First, the broad scope and complexity of problem areas addressed by the New York African Burial Ground Project have fostered the cross-fertilization of scholarship from diverse fields, including history, anthropology, political science, economics, religion, art history, literature, philosophy, biology, and law. History and economy have tended to dominate many studies, but anthropology and biology are proving undeniably important. Research in other fields, such as folklore and law, also provide much-needed perspective.

Second, historians today confront issues of central importance to understanding the modern world that require long overdue revisions or corrections to earlier perspectives. History, as it is written, influences the daily lives of people whose ancestors were woefully oppressed and who still suffer in real ways from the harsh legacy of that oppression. False impressions are a threat to an accurate understanding of the past and are a deep insult to the people whose history they misconstrue. Recent historical scholarship critically reexamines long-held beliefs and misunderstandings and attempts to reinvestigate old problems from fresh and sometimes painfully confrontational perspectives.

Third, recent scholarship encourages more pluralistic and multidimensional understandings of the past. Although much of history and anthropology continues to be performed by scholars of European descent, scholars of African and Native American descent are leaders in these fields. Scholars of diverse backgrounds and life experiences are beginning to challenge existing frameworks for understanding history and anthropology; they offer new ways to think, new ways to evaluate, and new ways to learn. Following the leads of critical theory and American Pragmatism, recent scholarship celebrates academic and social pluralism and seeks to find balance through the juxtaposition of multiple, competing perspectives. As Blakey (1995:226) observed in his critique of Afrocentrism, the "inextricable multidimensionality of our human cultures and our biologies is equally characteristic of our philosophies. . . . To deny these facts denies us humans a future as a better, more coherent world community."

Finally, the dedicated work of increasing numbers of scholars and the recent revolution in information management has resulted in many new data. The publication in 1999 of *The Transatlantic Slave Trade: A Database on CD-ROM*, for instance, has allowed scholars to quantitatively examine an unprecedented volume of data pertaining to the transatlantic trade. A number of important publications have made extensive use of the database, but much remains to be learned. Some of the basic conclusions of earlier scholars will be little changed by these and other studies, but the contours of the trade and the way questions are asked will undergo both subtle and radical revision. Further, investigations at sites like the New York African Burial Ground are producing important new data. As these data are made available and compared with the growing database of information on other sites from around the Atlantic World, scholars will have an opportunity to examine the documentary, material, and biological manifestations of forced migration and slavery in ways that were previously inaccessible to scientific investigation. Archaeology has the unique capacity to shed light on truths that escaped the written word. The researchers' juxtaposition and interrogation of data from archaeology, history, biology, and other fields could begin to provide new understandings of how the Atlantic World formed and how it shaped the modern world.

In summary, the New York African Burial Ground research provides crucial information on several topics that are of central importance to understanding the formation of the modern world, including the physical and social impacts of northern slavery, the emergence of race and racism, the formation of diasporic African identities, and the contributions of diasporic Africans to culture and economy. These themes are developed and explored throughout this volume. It is hoped that the reader will recognize how the lives, lifestyles, and experiences of some of our ancestors are reflected in the lives and lifestyles we lead today. In this report, for instance, several terms are used to describe populations under study: African, Native American, European, African American, Euroamerican, black, and white. Terms such as "African American" or "black" are in some cases used interchangeably, although they do not share precisely the same meaning. The category "black," for instance, could in seventeenth- and eighteenth-century New York include individuals of African, Native American, or even European (e.g., Portuguese) affiliation or descent. The usage of a variety of terms to discuss the populations under study reflects variation in the particular topics being discussed, which sources of information are used, and differing lexicons among disciplines. Usage of the terms "black" and "white" to refer to African

and African American and European and European American individuals, respectively, is common in the recent literature on historical-period Africans and African Americans in New York. Usage of these terms is in part a reflection of the racial typologies applied in historical sources, but it is also part of an ongoing struggle to define, redefine, and juxtapose historical and modern identities in a racialized world. Following the work of recent scholars, terms such as "black" and "white" are used on occasion so as to not distort or misrepresent historical discussions. When discussing anthropological or biological data, however, terms such as African or African American that stress the descent or cultural affiliation of individuals are preferred. It is hoped that the reader will recognize that the use of terminology is rooted in an attempt to maintain historical and scholarly accuracy and is not intended to support the racial typologies the New York African Burial Ground research helps to demonstrate as false and inaccurate. Usage of the African Burial Ground occurred at a critical time in world history, in a historic context that became increasingly racialized over time, and it is partly through the study of the African Burial Ground and other diasporic contexts that Americans can begin to learn how we became who we are today.

Chapter 2

Project History

No presentation of the history of the New York African Burial Ground Project can be separated from the political aspects of the research. The project was an extraordinary and unprecedented undertaking that involved numerous disagreements and confrontations as well as contestations of power and authority. Multiple versions of this history exist in various documents (Blakey 2009a; Cantwell and Wall 2001; Cheek 2007; Frohne 2002; Howson, Bianchi, and Perry 2009; National Park Service 2006; Pearce 1996). Additionally, two Ph.D. dissertations and several published articles provide extensive discussion and analysis of the project history from political, sociological, and cultural perspectives (Blakey 1998a, 2001; Epperson 1996, 1999a, 2004; Frohne 2002; LaRoche and Blakey 1997; McCarthy 1996; Mack and Blakey 2004; Pearce 1996). To varying levels of detail, each project history provides its own perspective. This chapter is an attempt to provide a balanced view that highlights major events and turning points in the New York African Burial Ground research. For further information, readers are asked to consult the published reports in the research volume series (available in both electronic and print formats) and the supporting documents cited in this chapter.

The New York African Burial Ground was discovered during archaeological testing of a plot of land in Lower Manhattan. The land was purchased by the GSA as part of a $276-million project to develop office space for federal employees who work in the city. The GSA provides "federal employees with work environments through building, leasing, managing, and developing properties" (Frohne 2002:16). On March 1, 1988, the GSA submitted a prospectus to the Committee on Public Works and Transportation of the House of Representatives outlining its plans for two sites—290 Broadway and Foley Square (Cantwell and Wall 2001:278; Frohne 2002; Howson, Bianchi, and Perry 2009). The GSA planned to lease-purchase and develop the two commercial sites, which, at the time, were owned by the City of New York. On the 290 Broadway site, where the New York African Burial Ground is located, the GSA planned to build a 34-story office building on Broadway and a 4-story pavilion at the corner of Elk and Duane Streets (Cantwell and Wall 2001). The buildings were intended to "house US Attorney offices, an Environmental Protection Agency regional office, and the IRS district office" (Frohne 2002:18). The GSA justified the project by citing a lack of suitable office space in Lower Manhattan for federal employees (cf. Pearce 1996). The GSA and former Mayor Edward Koch signed a Memorandum of Agreement (MOA) regarding the GSA's development interests on March 11, 1988, and the project prospectus was approved by Congressional committee on May 5 of that year.

The following year, on March 15, 1989, the GSA and the Advisory Council on Historic Preservation signed an MOA detailing the GSA's Section 106 and Section 110 responsibilities under the National Historic Preservation Act (NHPA) of 1966 (Howson, Bianchi, and Perry 2009:3). Section 106 responsibilities included developing a plan to involve the public and the identification of consulting parties as described below:

> The Section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertak-

> ing on historic properties, commencing at the early stages of project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties [36 CFR 800].

Section 110 responsibilities require federal agencies to (1) identify, evaluate, and nominate historic properties for listing in the National Register of Historic Places (NRHP); (2) manage and maintain historic properties "in a way that considers the preservation of their historic, archaeological, architectural, and cultural values in compliance with section 106"; (3) consider adverse effects on properties not under agency jurisdiction; (4) consult "with other Federal, State, and local agencies, Indian tribes, Native Hawaiian organizations carrying out historic preservation planning activities, and with the private sector"; and (5) follow a series of other regulatory procedures aimed at the preservation of nationally significant historic properties (16 *U.S. Code* 470h).

The New York State Historic Preservation Office (NYSHPO) did not sign the original MOA because they concluded the document failed to address adequately the GSA's Section 106 responsibilities. At the time, the Advisory Council on Historic Preservation did not realize that in addition to the Foley Square Property, the existing MOA pertained to 290 Broadway, where historical maps placed the African Burial Ground. The Advisory Council on Historic Preservation requested a new or amended MOA that reflected this new understanding, but the GSA refused to draft a new MOA or an amendment to the existing one (Frohne 2002:22).

The GSA hired the firm Edwards and Kelcey in 1988 to draft an Environmental Impact Statement (EIS). Edwards and Kelcey subcontracted Historic Conservation and Interpretation (HCI)—a cultural resource management (CRM) firm—to draft the section on cultural resources for the EIS (Howson, Bianchi, and Perry 2009:1), which included information on the historical-period location and use of the African Burial Ground (Ingle et al. 1990). Published in July 1990, the EIS speculated that much of the African Burial Ground would have already been destroyed by the construction of buildings with deep subbasements. The EIS suggested that three portions of the project area may have experienced minimal disturbance and were more likely to contain intact archaeological deposits—former Lot 12 (80 Duane Street); portions of Lots 20, 20½, and 21 (60 and 62–64 Duane Street); and Republican Alley, an eighteenth-century alley that was never built upon. Intact burials were considered most likely in the Republican Alley portion of the project area. The EIS recommended limited testing of these areas to determine if any remains of the cemetery were extant (Cheek 2007:4; Howson, Bianchi, and Perry 2009:3).

The GSA purchased the Foley Square and 290 Broadway properties for a total of $104 million in December 1990 (Frohne 2002:19). HCI began test excavations in the Lot 12 and Republican Alley portions of the project area in May 1991 (Howson, Bianchi, and Perry 2009:6) (Figure 2). Test procedures included sample units, trenches, and borings. Tests in the Republican Alley portion of the project area were intended to test for remains of the African Burial Ground, and those in Lot 12, for domestic occupations postdating the Revolutionary War (Cheek 2007:4–5). Scattered human remains were soon discovered in disturbed contexts that were the result of prior construction activities (Cantwell and Wall 2001:281). Cheek (2007:5) reported that on May 28 human cranial fragments were discovered at 14.5 feet below grade in the Republican Alley portion of the project area. In situ human burials were discovered buried under fill deposits as much as 25–30 feet thick. As Howson, Bianchi, and Perry (2009:3) have written, "This fill had protected hundreds of graves, and the discovery of this level of preservation came as a surprise." The *New York Times* reported the discovery of human remains on June 15, 1991 (Hays 1991:25).

Rather than first determining the horizontal and vertical extent of buried remains through testing, as is normally required, the GSA decided to fully excavate the exposed burials (Howson, Bianchi, and Perry 2009:3). Excavation quickly revealed that the number of intact burials was large. HCI hired the Metropolitan Forensic Anthropology Team (MFAT), which had earlier identified and analyzed the skeletal remains of formerly enslaved New Yorker Pierre Toussaint (Cantwell 1994), to assist in the burial excavations. MFAT was headed by James Taylor of Lehman College. HCI also hired Michael Parrington to direct excavations, as "Parrington had a great deal of experience in excavating burial sites in urban settings; he had been in charge of the excavations at two nineteenth-century African American cemeteries in Philadelphia" (Cantwell and Wall 2001:282).

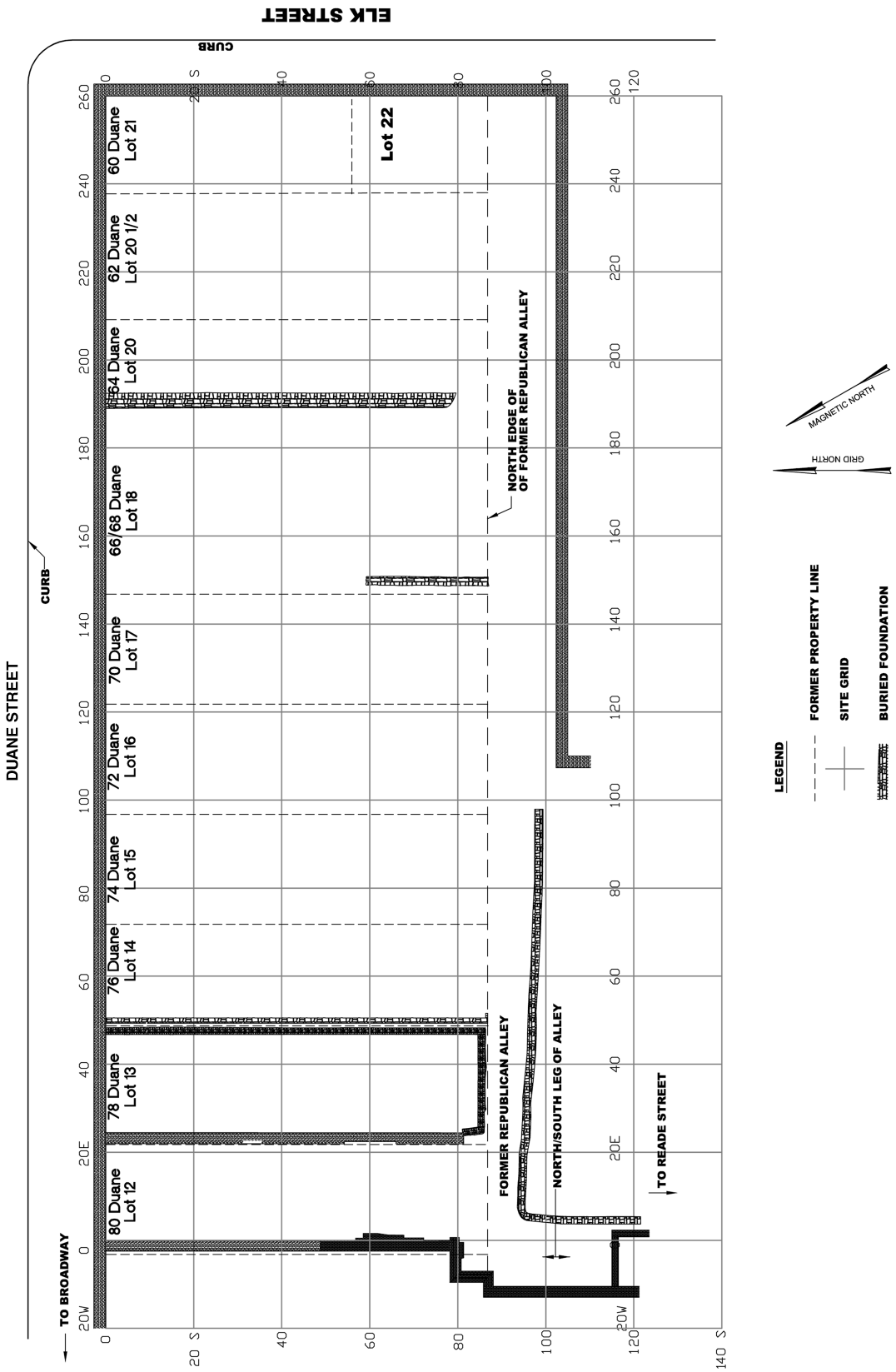


Figure 2. Plan map of the archaeological excavation area, showing former property lines, buried foundations, and the site grid (from Volume 2, Part 1 [Howson, Bianchi, and Perry 2009:Figure 2]).

Fieldwork

Mechanical equipment was used to remove huge amounts of overburden in order to expose deposits immediately above those in which graves were found (Figure 3). Hand excavation began once the tops of grave shafts or remnants of coffins had been exposed. Access ramps, perimeter walls, shoring facilities, and excavation shelters were constructed in excavation areas according to OSHA requirements (Figure 3). The GSA prioritized the footprint for the tower building as a "Critical Area" and, according to Howson, Bianchi, and Perry (2009:8), pressured archaeologists to clear that area faster than other areas. As a result of rushed clearing efforts, some historical-period features overlying graves were hastily removed or destroyed without documentation. In most places, the opportunity to identify the original ground surface was also lost. According to Howson, Bianchi, and Perry (2009:8), the eighteenth-century ground surface was only identified in the Republican Alley portion of the project area, where fill layers immediately above grave shafts were removed by hand, rather than by machine. Excavation areas in Lots 14–17 and 22 and in the southern quarter of Lot 20½ were "cleared by heavy equipment to the approximate transition between the A horizon, the eighteenth-century historic ground surface, and the B horizon, where grave outlines would be exposed" (Cheek 2007:8). Vertical control was maintained with reference to a site datum (Datum A) that was assigned an elevation of 31.04 feet above the Manhattan datum. In addition to graves, a total of 69 excavation units were excavated in different areas of the site. Excavation units were typically 5 by 5 feet or 10 by 10 feet, but the size of excavation units varied depending on the size of the resource under investigation (e.g., a house foundation) and other factors. Excavation levels were determined according to cultural strata or arbitrary levels within cultural strata (Cheek 2007:8).

Figure 3. Backhoe clearing adjacent to temporary archaeological excavation shelter early in the fieldwork. (photograph by Dennis Seckler) (from Volume 2, Part 1 [Howson, Bianchi, and Perry 2009:Figure 3]).

Burials were assigned consecutive numbers according to standard practice. A total of 436 burial numbers were assigned; some burial numbers corresponded to discoveries that were determined not to be graves or were later assessed to be parts of other graves. Ultimately, a total of 424 graves were identified, and skeletal material from 419 individuals was inventoried in the laboratory by the Howard University team. Fifteen burials were exposed but never excavated and were left in situ when the excavation of the burial ground was officially closed in October 1992. Remains from a total of 391 individuals were sufficiently preserved to be subject to laboratory skeletal or dental measurement and, in this sense, were the individuals entered into the anthropometric record. These are the individuals on which most scientific observations are based and that ultimately form the anthropometric sample from the New York African Burial Ground (Mark Mack, personal communication 2007). Catalog numbers were also assigned to excavated materials. Unfortunately, each burial (except Burial 1) was assigned only one catalog number. Although the researchers could sometimes use bag labels or drawings to reconstruct where items came from within a grave, it was often impossible to determine in the laboratory if a specific item was recovered from the grave shaft or from above, alongside, beneath, or within a coffin. From a post-field analytical standpoint, it was difficult to determine the specific relationships of particular artifacts to mortuary behavior, as all materials from within a grave were essentially assigned the same provenience designation (Howson, Bianchi, and Perry 2009:10).

Grave-shaft-fill deposits were excavated en masse from above coffins and screened through a ¼-inch-wire mesh. Elevations of coffin lids were taken when evidence of coffin material was exposed. Samples of coffin wood were collected from the lids, sides, and bottoms of coffins when possible. Excavators attempted to locate the cranium and femurs of a given individual first, followed by "legs and arms, chest, hands and feet, and finally the facial and pelvic areas" (Howson, Bianchi, and Perry 2009:10). Artifacts within the coffin area were recorded in situ when possible, but fill deposits removed from the matrix

surrounding skeletal material were also screened for artifacts. Soil samples intended for macrobotanical, palynological, and parasitological analyses were taken from "the coffin lid area, the stomach area, the thoracic area, the pelvic area, and the sacrum" (Howson, Bianchi, and Perry 2009:22). An additional "control" sample was taken from grave-shaft-fill deposits in order to reconstruct past environment and to assess soil conditions. Although the specific locations of control samples were not recorded, the researchers were sometimes able to use other information, such as when a label was written, to infer more specifically where the control samples were located. Once individuals were fully exposed, an MFAT anthropologist assessed individuals in situ for age, sex, and pathology.

Field recordation standards evolved over time and varied between excavators. Field notes that documented site stratigraphy were apparently not made, although descriptions of specific deposits were occasionally produced. Profiles and scaled plan maps were drawn of each investigated feature, and profiles were drawn for each wall of excavation units (Cheek 2007:9). Field forms specifically tailored to burial excavation were adopted partway through the project, and over the course of the project, different forms were used by HCI, John Milner Associates, Inc., and MFAT. Plan maps were made of each burial in situ. The earliest burial drawings were made by the excavators of burials. Later burial drawings were made by those among the field crew who proved to be particularly skillful in mapping tasks (Howson, Bianchi, and Perry 2009:23). Vertical and horizontal measurements (in hundredths of feet) were taken for the burial drawings, with depths below datum "typically taken at the cranium, shoulders, elbows, innominates (hip bones), sacrum, knees, ankles, feet, and central vertebrae" (Howson, Bianchi, and Perry 2009:23). Burials were then traced onto site maps, but according to the researchers, it was often difficult to determine the relative stratigraphic position of overlapping burials using the site maps alone. Photographs of each burial—showing burial number, date, grid north, and a scale—were made on 35-mm black-and-white negative and slide film (Howson, Bianchi, and Perry 2009:23).

Archaeologists initially estimated they would discover approximately 50 burials, but under pressure from the GSA, HCI contracted with MFAT for the treatment of only 10 burials. As many as 30 field crew members worked 7 days a week, 11 hours a day (Blakey 2009a:6). Coffin remains and artifacts recovered from grave shafts were bagged and sent to the HCI laboratory facility or space provided by the GSA. Artifacts that were directly associated with human remains were separately bagged and sent to the project conservator's South Street Seaport laboratory in lower Manhattan (Howson, Bianchi, and Perry 2009:10, 22). Excavated remains were wrapped in newspaper, placed in cardboard boxes, and stored in a three-room laboratory at Lehman College. Newspaper can damage materials stored with it because of its acidic content, although, at the time, the use of newspapers for temporary storage of bones was a standard practice. Members of the descendant community considered the use of newspaper—essentially trash—to wrap the remains to be enormously disrespectful.

Construction began on the site in October 1991 while the archaeological excavation was under way. As excavation and construction proceeded, no research design detailing research questions, reporting, or public involvement or the procedures for feature discovery, the recovery of human remains, curation, reburial, or data management had been developed (Blakey 2009a:8). The lack of an adequate research design became a major issue that, in the view of many observers, underscored the haste and disrespect of the GSA. Ultimately, the lack of an adequate research design was a tipping point that enabled African Diaspora scholars to gain intellectual control of the project (La Roche and Blakey 1997; McCarthy 1996).

By December, archaeologists had discovered hundreds of burials. The GSA reported that delays in the construction schedule had cost $6 million (Cantwell and Wall 2001:283). Frustrated by the pace of excavations, building project manager John Rossi complained in a controversial December 6, 1991, *New York Times* article that burial excavations at the New York African Burial Ground proceeded too slowly. In the article, he suggested that in place of conventional archaeological excavation methods, the archaeologists adopt a "coroner's method" to speed excavations. David Paterson, New York State Senator at the time, became disturbed by suggestions to switch to more expedient excavation techniques and on December 16, 1991, established a Task Force consisting of preservationists and concerned citizens to oversee the project.

The Advisory Council on Historic Preservation, the GSA, and the Landmarks Preservation Commission (LPC), who had earlier entered into discussion regarding the excavations in September, signed an amended MOA on December 20, 1991. The original MOA was executed to provide measures in the

event that historic properties were encountered. Once the burial ground was identified, the amendment was necessary to provide specific mitigation for the impacts to the burial ground. The amended MOA required the GSA to develop and implement a research design for the project and made stipulations regarding the sensitive removal, analysis, and reinterment of human remains and burial-associated artifacts and the curation of research data and materials that would not be reinterred (Perry, Howson, and Bianco, eds. 2009b:Appendix A.1). The research design was to document "the testing, survey, and data recovery methods used to date and to be used to complete work on the Federal Building site and Courthouse site" (U.S. Congress Subcommittee 1992:119). In addition to these measures, the amended MOA stipulated plans for public involvement, the production of a documentary video, and the development of a memorial and interpretive center (Perry, Howson, and Bianco, eds. 2009b:Appendix A.1). Over the next 15 years, the amended MOA guided the GSA's subsequent activities for the project.

As excavation proceeded, community concern and outrage grew. Many felt that the GSA acted in bad faith and discriminated against African Americans. Community members argued that excavation and construction at the site were impermissible acts of desecration (Blakey 2009a; La Roche and Blakey 1997:95). Scorn was heaped on HCI and MFAT for their involvement, although many problems stemmed ultimately from GSA actions. In general, community members wanted excavation to cease and the deceased to be memorialized and reinterred on-site. Community members were also concerned that no African American archaeologists were working on the project and that expertise in African Diaspora studies was notably lacking. Members of the descendant community disagreed on other points. Some community members wanted immediate reburial; others wanted analysis of the remains. Many African Americans felt a strong spiritual connection to individuals in the African Burial Ground; some could have been lineal descendants of the deceased. An altar was erected at the site for making offerings to the ancestors. Another altar was erected at Lehman College (Frohne 2002:42). According to Cantwell and Wall (2001:285), archaeologists "were enormously committed to their work at the site, which many thought was one of the most important they had ever excavated, and felt that they were doing their best in a difficult situation to perform a highly professional job." The situation, however, increasingly made archaeologists uncomfortable working for the GSA.

Members of the African American community voiced concern over how their ancestors were being stored, prompting Dr. Blakey, former curator of the W. Montague Cobb Biological Anthropology Laboratory at Howard University, to insist that he "inspect the conservation techniques" (Frohne 2002:33). In his evaluation of recovered human remains, Dr. Blakey reported that many intact remains had been damaged as a result of rushed excavation methods. In addition, storage of the remains did not meet acceptable conservation standards. A number of conditions, including exposure to ultraviolet light, mold growth, acidic packing materials, uncontrolled variation in temperature and humidity, and mechanical stress contributed to the deterioration of the excavated human remains. Part of the storage problem rested in the fact that, under pressure from the GSA, MFAT had only contracted for an estimated 10 burials, although HCI initially prepared a contract for 50 burials. As a result, MFAT was not adequately prepared to properly conserve materials from the much larger number of graves excavated. By August 1992, the remains of more than 400 individuals were stored in the lab space at Lehman College. By September 22, 1992, an LPC inspection of the Lehman College facilities revealed that many of the deleterious conditions witnessed by Blakey had been corrected. Temperature and humidity were controlled, and remains were stored in museum-quality cabinets using acid-free packing materials (Frohne 2002).

Concurrent construction and archaeological excavation activities in overlapping areas of the site resulted in unfortunate accidents and damage to some burials (Figure 4). Such accidents did not inspire confidence that the GSA had acted in good faith. On February 14, 1992, approximately 20 burials were irreparably damaged as a result of a construction accident involving a backhoe. A GSA representative claimed the accident resulted from their use of an out-of-date map, but "many observers simply did not believe him" (Cantwell and Wall 2001:284). LPC archaeologist Dan Pagano was apparently prevented from making his "scheduled weekly inspection" after the accident (Frohne 2002:35). Pagano reportedly discovered "HCI archaeologists sorting through jawbones and leg and arm bones outside of the excavation area when he was photographing the site with a telephoto lens" (Frohne 2002:35). Pagano was allowed to reenter the site on February 19, 1992, at which point GSA Regional Administrator Bill Diamond halted construction in

Figure 4. Construction of the 290 Broadway Federal building proceeded during the archaeological fieldwork. The archaeological excavation shelter is visible at the rear. The view is toward the southeast (photograph by Dennis Seckler) (from Volume 2, Part 1 [Howson, Bianchi, and Perry 2009:Figure 6]).

areas where archaeologists were working. Vandalism also occurred on the site. Although the site was protected at night by a team of two security guards, illness and inclement weather interrupted surveillance of the site for approximately 14 hours the evening of March 6, 1992. At some point during the night, 6 burials were disturbed by vandals who entered the site and "damaged skulls and [stole] teeth and pelvic bones" (Frohne 2002:36).

The GSA submitted a research design (Rutsch 1992) in April 1992 to the Advisory Council on Historic Preservation, but it was found to be unacceptable. The research design was supposed to address data recovery methods, public involvement, analysis, curation, reburial, data management, and reporting. Ideally, it should have been completed and approved prior to excavations (U.S. Congress Subcommittee 1992). Unfortunately, HCI was under tremendous pressure from the GSA to complete excavations, working overtime 7 days a week. Edward Rutsch (1992) regretted that he had no time to develop an adequate research design. In a letter to Regional Administrator William Diamond, the Advisory Council on Historic Preservation Eastern Office of Project Review Director Don Klima wrote that the Advisory Council on Historic Preservation was "extremely disappointed with the content" of the research design submitted by the GSA (U.S. Congress Subcommittee 1992:125; see also La Roche and Blakey 1997:86). Klima described the research design as "a hastily prepared and incomplete document which fails to outline the measures which will be taken to ensure the proper treatment of archeologically significant areas of the project sites" (U.S. Congress Subcommittee 1992:125). La Roche and Blakey (1997:86, 88) characterize the research design as providing inadequate treatment of African or African American bioarchaeology and New York black history and placing excessive emphasis on racial identification. The Advisory Council on Historic Preservation recommended that the GSA "either hire additional consultants experienced in urban archaeology and human remains or enter into a cooperative agreement with a Federal agency experienced in urban development projects, i.e. the U.S. Army Corps of Engineers" (U.S. Congress Subcommittee 1992:127). Further, the Advisory Council on Historic Preservation recommended a revised research design be submitted July 16, 1992, and that the GSA meet with the LPC, Advisory Council on Historic Preservation, and community representatives to discuss the research design (U.S. Congress Subcommittee 1992:127–128). In May 1992, former Mayor David Dinkins (Figure 5) established a Mayor's Task Force of concerned citizens. Two months later, Mayor Dinkins requested (as he had the previous fall) that the GSA suspend excavations. In commenting on the *Draft Research Design for Archeological, Historical, and Bioanthropological Investigations for the African Burial Ground and Five Points Area New York, NY*, the Minority Environmental Lawyers Association argued that in keeping with Advisory Council on Historic Preservation's policy, the concerns of the descendant community regarding the treatment of human remains and grave goods should be addressed. As Section 106 responsibilities include involvement of the public and invitation of interested parties to consult, the GSA began holding regular public meetings where interested members of the public could voice their concerns. Many participants felt, however, that the GSA was not responding to their concerns or allowing interested parties to consult in the decision-making process (Cantwell and Wall 2001:284).

Starting July 1, the GSA hired John Milner Associates, Inc., of West Chester, Pennsylvania, a cultural resource management firm with experience conducting large excavations of African American sites in urban areas. John Milner Associates, Inc., was tasked with managing excavations and producing a revised research design. The GSA also hired—through a separate contract—Dr. Michael Blakey to work with John Milner Associates, Inc. in preparing the research design (Howson, Bianchi, and Perry 2009:3). By July 13, more than 400 burials had been exhumed, and it was estimated that 120 unexcavated burials remained

Figure 5. Mayor David Dinkins (center), Peggy King Jorde (Mayor's Liaison), and Howard Dodson (Chief, Schomburg Center) (front) are briefed on the excavation by Michael Parrington (Principal Archaeologist for HCI and John Milner Associates) (left) (from Volume 1, Part 1 [Blakey 2009a:Figure 7]).

in the pavilion portion of the site. An unknown number of unexcavated burials remained in the ramp area of the site. John Milner Associates, Inc., reported that it needed approximately 6–8 weeks to produce a revised research design.

On July 13, 1992, the Advisory Council on Historic Preservation advised the Mayor's Advisory Committee that the terms of the amendment to the MOA were not being adequately fulfilled. As a consequence, the Advisory Council on Historic Preservation recommended that "all work should be suspended until GSA evaluates the feasibility of preservation-in-place for remaining burials; decides how and where to reinter exhumed burials; evaluates the significance of the site; and, develops a plan for the curation and management of all archaeological remains" (U.S. Congress Subcommittee 1992:157). Community representatives recommended that the building project be redesigned to accommodate archaeological findings, but according to the Advisory Council on Historic Preservation, the GSA countered that "without Congressional legislation, they [would] remove all human remains and construct a building without a memorial or museum commemorating the burial site" (U.S. Congress Subcommittee 1992:157).

The July 27, 1992, Subcommittee Hearing

In July 1992, failure to produce an adequate research design prompted U.S. Representative Gus Savage to immediately convene a Subcommittee Hearing on the African Burial Ground. Congressman Savage planned for the hearings to be conducted in New York, so that public comment could be elicited.

A crucial aspect of the hearings was that the subcommittee chaired by Congressman Savage was the same subcommittee that had previously authorized funding for the GSA project prior to Congressman Savage's chairmanship. In the beginning of the hearings, Congressman Savage warned that "whatever Congress authorizes, it can de-authorize. And if this Subcommittee and its parent Committee is dissatisfied with how things are proceeding when we return to Washington tomorrow, we will proceed to exercise in whatever way necessary that authority" (U.S. Congress Subcommittee 1992:6; also quoted in Frohne 2002:49). Congressman Savage was deeply concerned with how the GSA's project was proceeding. Prepared

testimony was provided by numerous key witnesses, some of whom testified orally during the hearing.[1] Others did not have an opportunity to testify before the hearings were ended. In his prepared testimony, Howard Dodson, Chair of the Mayor's Advisory Committee and Director of the Schomburg Center, summarized the opinions expressed by many who opposed the GSA's actions. Dodson wrote that the GSA had:

- Knowingly initiated construction of the Federal Building without apparently seeking an alternative site as required by law
- Conducted the excavation without benefit of an approved research design in violation of the terms of the memorandum of agreement
- Damaged remains of up to 20 burials through construction in an excavated site
- Submitted an archaeologically unprofessional and culturally insensitive draft research design that reflected a general lack of appreciation for the historical and cultural significance of the find
- Refused to consider reinterring the human remains in the Federal Building site
- Refused to consider providing adequate space and funding for an appropriate memorial museum in the Federal Building
- Refused to consider redesigning the pavilion to accommodate some of these functions
- Continued to excavate human remains over the protests of African Americans and concerned New Yorkers [U.S. Congress Subcommittee 1992:170].

For their prepared testimony, the GSA argued that continued excavations were producing extremely valuable scientific information on an eighteenth-century African American community. According to the GSA, John Milner Associates, Inc., had advised against halting excavation of the exposed remains because conditions resulting from partial excavation would expose burials to further deterioration if reburied. The Professional Archaeologists of New York City (PANYC), however, countered this argument by suggesting that chemically similar clean fill be used for reburial. Financial concerns also loomed large. To the GSA, halting excavation and construction in the pavilion area would result in a loss "in excess of $40 million comprising of $10 million in land acquisition costs, $25 million in construction costs and approximately $5 million in interest payments" (U.S. Congress Subcommittee 1992:166). With the exception of GSA officials, most witnesses who testified during the hearings or provided prepared testimony objected to (1) how excavation and curation were proceeding, (2) the lack of an adequate research design, and (3) the lack of descendant community involvement. Most witnesses recommended that excavation be halted until these issues were addressed.

At the end of the hearing, Congressman Savage concluded that the GSA was in violation of Section 106 and the MOA. Congressman Savage recommended that (1) the Committee order the GSA to provide an amended prospectus immediately and that (2) no pending requests or lease renewals of the GSA were to be signed by the subcommittee until "we get a more honest and respectful response to what we have heard here today"(U.S. Congress Subcommittee 1992:80). Congressman Savage concluded the hearing by poignantly decrying,

> don't waste time asking this Subcommittee for anything else so long as I'm Chairman, unless you can figure out a way to go around me. I am not going to be a party of your disrespecting what people here have testified, what scholars have called, "the most important archaeological discovery of the century." I don't know what the African American community and other people of conscience in this city must do, but I'm going to do, Gus Savage, everything in my power to make you change your obstinacy and your disrespect for a sector of this City [U.S. Congress Subcommittee 1992:80].

The following day, Congressman Savage met in his office with GSA Administrator Richard Austin, representatives of the development company (Linpro), and members of the Congressional Committee. As a result of the meeting, Austin agreed to cease excavation. After an agreement between government officials at New York City's mayoral residence, Gracie Mansion, a Federal Steering Committee was established

[1] Witnesses who provided testimony at the July 27 Subcommittee Hearing included Dr. Michael Blakey (physical anthropologist, Howard University), Dr. Robert Bush (executive director, Advisory Council on Historic Preservation), Dr. John Henrik Clarke (African American historian, Hunter College and Cornell University), Hon. David Dinkins (Mayor, New York City), Milton Herson (Commissioner, GSA), William Diamond (Regional Administrator, GSA), and Hon. David Paterson (State Senator, 29th District of New York). Noel Pointer (Chairman, Coalition for the Preservation of the African Burial Ground), Kent Barwick (Municipal Art Society), Elombe Brath (Patrice Lumumba Coalition), Robert MacDonald (Museum of the City of New York), and Howard Dodson (Chair, Mayor's Advisory Committee and Director, Schomburg Center) were slated to testify but did not before Congressman Savage ended the hearing (Frohne 2002:51).

"to facilitate community involvement." The Federal Steering Committee was funded by the GSA and headed by Howard Dodson, director of the Schomburg Center for Research in Black Culture (U.S. Congress Subcommittee 1992:198).

Although excavation ceased, the Advisory Council on Historic Preservation was concerned about potential impacts on burials that had been exposed but had not been fully excavated. Following consultation with the GSA, LPC, Mayor's Advisory Council on Historic Preservation, and the Federal Steering Committee, the remaining 11 exposed burials were excavated by John Milner Associates, Inc. After excavations were complete, the LPC monitored the site on a weekly basis. Flooding was discovered through LPC monitoring on August 12, 1992. The site was stabilized with clean-sand fill and drainage pipes on August 27, 1992, and burial locations covered by the fill were marked. The New York African Burial Ground was officially closed on October 9, 1992. The pavilion portion of the building project was removed from the design, under pressure from stakeholders, and it was here that the excavations were stopped. Only those remains exposed at the time of the hearings were removed. The building project was completed according to schedule in December 1994, but building occurred only in those areas where excavation had been completed. Other areas of the site that had not been excavated were not built upon. Stakeholder concerns, including those of the descendant community, and subcommittee hearings were instrumental in getting the project halted before all remains were removed.

Howard University and John Milner Associates, Inc.'s Research Design

A follow-up subcommittee hearing was held on September 24, 1992, to check on progress since the July hearing. During the hearings, Congressman Savage questioned GSA decisions regarding the research design as well as the need for John Milner Associates, Inc.'s involvement. Congressman Savage wondered why the GSA paid John Milner Associates, Inc., $50,000 to identify and contract African American researchers already identified by Blakey rather than pay Blakey directly to do the work.

Blakey testified during the September 24 subcommittee hearings that the Howard University/John Milner Associates, Inc., research design for analysis would result in "the most sophisticated and comprehensive skeletal biological project ever conducted" and that in Howard University and John Milner Associates, Inc.'s hands, the project would be "a model for community engagement" (U.S. Congress Subcommittee 1992:254). A week before, on September 18, the GSA had appointed Dr. Blakey to the position of Scientific Director, giving him oversight over all aspects of the research for the project. The research design included input from 42 scholars and was submitted on time on October 16, 1993. The research design argued that the African Burial Ground was eligible for listing in the NRHP based on its association with broad historic trends and important events (Criterion a) and its ability to yield important information on history or prehistory (Criterion d) (Howard University and John Milner Associates, Inc., 1993) (see Appendix B to Volume 1, Part 2 of this series, *Skeletal Biology of the New York African Burial Ground*). Originally, the African Burial Ground was identified as important under only Criterion d, which, according to the Minority Environmental Lawyers Association, made the site a removable resource that was significant only for its information potential. According to this logic, "any adverse effect [including the removal of all burials] can be mitigated by scientific study" (Epperson 1999a:96).

Howard University researchers regarded the descendant community as their ethical client and actively incorporated methods for addressing questions and themes of interest to them (Blakey 2009a:13; Mack and Blakey 2004). A major component of the new research model was the inclusion of Africanist and African Americanist scholars in all levels of the research (La Roche and Blakey 1997:86). The New York African Burial Ground research team, headed by Scientific Director Dr. Michael Blakey, celebrated the transfer of intellectual power from a white-owned CRM firm to a team of predominantly African American scientists and humanists with backgrounds in African Diaspora studies (La Roche and Blakey 1997). Blakey (2009a:14) has stated that "many anthropologists expressed fears that the project supported the notion that only blacks could study black sites—a position never put forward by the project—indeed, our research team consisted of racially diverse scholars."

Issues that were of principal concern to the descendant community were developed through the process of public engagement. These included developing knowledge on: "(1) The cultural background and origins of the burial population, (2) the cultural and biological transformations from African to African

American identities, (3) the quality of life brought about by enslavement in the Americas, and (4) the modes of resistance to enslavement" (Howson, Bianchi, and Perry 2009:5). The first three questions were presented in Howard University and John Milner Associates, Inc.'s (1993) original research design as major research questions. According to La Roche and Blakey (1997:86–87), the fourth question—concerning modes of resistance—was added by team members in 1995. These were the major issues that guided research (Blakey 2009a:13). Numerous questions specific to individual studies are presented in the technical volumes as well as in subsequent chapters in this volume.

The GSA sent the research design out for comments to a number of interested parties, including the Advisory Council on Historic Preservation, LPC, Federal Steering Committee, Office of the Mayor, and the Senate Task Force. The Advisory Council on Historic Preservation and LPC were concerned about the project's corrective, or vindicationist, approach to history (see Chapter 9), an African American intellectual tradition that emphasizes correcting the misrepresentations and distortions of established history (see Chapter 9). Reviewers interpreted the research approach as ethnocentric and suggested that the project instead adopt a "multicultural" approach (Blakey 2009a:14; La Roche and Blakey 1997:91). The Advisory Council on Historic Preservation was also concerned about the lack of involvement of local anthropologists and the limited attention paid to the spiritual significance of the site (Blakey 2009a:14). MFAT sent the research design out for comment to 120 colleagues. Many comments made about the research design had to do with racial assessment of individuals. Although racial assessment is common in forensic studies, the research team regarded racial assessment as inappropriate to bioarchaeological study. At least as early as Hrdlička's (1918, 1928) work, racial assessment has been used in racist attempts to falsely demonstrate black inferiority or to justify prejudicial treatment of African Americans (Blakey 2001, 2009a; La Roche and Blakey 1997:89; see also Epperson 1994, 1996, 1999a, 1999b). Blakey (2001, 2009a:12) has argued that racial assessment, although useful to forensic analysis, falsely reifies social constructs of race as biological realities. The research team's solution to this dilemma was to not perform racial assessment. Some comments applauded the research team's decision, but others were adamantly opposed (Blakey 2009a:11; Epperson 1999a). Some colleagues were also disturbed by the researchers' assumption that most or all of the buried individuals were of African descent (Epperson 1996). Based on field assessments, MFAT estimated that on the order of 7 percent of the remains could be European. Blakey countered that although some individuals of European or Native American descent could be present in the sample and others could have mixed African, European, or Native American ancestry, the use of racial assessment served only to uphold "the structure of a racist society" (Cook 1993:27). In place of racial assessment, Blakey and his coauthors were interested in investigating whether individuals could be tied to specific geographic subregions or macroethnic groups. The researchers felt that those kinds of questions were more pertinent to understanding the origins of people interred at the African Burial Ground.

In addition to important research themes, the engagement of the community also brought about some direction regarding how slavery and enslaved Africans in New York were to be discussed and the kinds of investigative methods approved by members of the descendant community. For one, the "researchers were strongly urged to refer to the Africans in colonial New York as 'Africans' or 'enslaved Africans,' rather than slaves" (Blakey 2009b:44). Community members argued that the term "slave" reinforces the dehumanizing perspectives of enslavers, whereas "enslaved African" more accurately reflects the forcible imposition of enslaved status on captive Africans. The descendant community also suggested that the historical naming of the "Negroes Burial Ground" be changed to the "African Burial Ground." The new name is consistent with the historical-period naming of African American institutions by African Americans, such as the African Methodist Episcopal Zion Church (est. 1796) and St. Philip's African Church (est. 1818) (Blakey 2009b:44; La Roche and Blakey 1997:84). Community members also recommended that the temporal and geographical scope of the project be expanded to include the Dutch occupation of New Amsterdam and consideration of events and processes in Africa and the Caribbean. Community members approved of the use of invasive methods, such as genetic testing and isotope studies, to study origins (Blakey 2009b:44).

The Federal Steering Committee

As a result of the subcommittee hearings, a Federal Steering Committee was created "in October 1992 to represent the interests of the community and make

recommendations to GSA and Congress regarding the present and future activities affecting the pavilion portion" of the New York African Burial Ground (Jorde 1993:7). The Federal Steering Committee consisted of 27 regular members including community activists, theologians, anthropologists, historians, a journalist, an attorney, a New York State senator, an architect, and representatives of the Schomburg Center for Research in Black Culture, the Smithsonian, the New York City Mayor's office, LPC, and the Museum of the City of New York. The committee also included 10 committee alternates and a total of 18 senators and congressional representatives. who by virtue of the offices they held acted as ex-officio committee members (see Appendix A). Under the chairmanship of Howard Dodson, Director of the Schomburg Center for Research in Black Culture, and using the amended MOA as a guide, the Federal Steering Committee recommended on August 6, 1993, a series of seven resolutions:

> I. Establish a world class museum and research center of African and African American history and culture within the National Historic Landmark. II. Erect memorial(s) within the landmark area. III. Instigate a signage program interpreting the history and culture of African peoples in the landmark area. IV. Install memorial art work and exhibit of the excavation in the lobby of the office building. V. Reinter the remains in the former Pavilion area. Construct a temporary memorial during research and a permanent one after reburial. VI. A sacred international service accompanies the reinterment. VII. The three million dollars be used towards the design and realization of these projects [summarized by Frohne 2002:67].

Most of these resolutions were fully met, with the exception of the museum. From the outset, the GSA stated that building a museum within the National Historic Landmark would not be feasible or within their mandate, and this recommendation was taken up by others, resulting in the current National Museum of African American History and Culture being planned on the Washington Mall. The GSA committed instead to creating an interpretive center for the African Burial Ground. The pavilion was deleted from project construction plans, and the office tower and foundation were modified to accommodate design changes. The lobby of 290 Broadway is literally covered with the artwork recommended by the committee, including a map placed in the lobby floor and monumental artwork located along the Duane Street side of the lobby. Reinterment was completed in October 2003 and consisted of 3 days of ceremonies, a vigil, and a procession. An amount of up to $3 million was allocated to the memorialization of the African Burial Ground by the Senate Appropriations Committee through the 1993 Treasury, Postal, and General Government Appropriations Bill, a bill approved by former President George H. W. Bush. The memorial, designed by architect Rodney Léon, an African American of Haitian descent, was completed and dedicated in a ceremony in October 2007.

Landmark Status Designation

During the 1992 Congressional Hearings on the Foley Square Construction Project and the Historic African Burial Ground, the chair of the New York City LPC, Laurie Beckelman, provided a list of designated New York City landmarks and historic districts relevant to the history of African Americans in New York City (U.S. Congress Subcommittee 1992). Landmarks and historic districts in Manhattan, Brooklyn, Queens, Staten Island, and the Bronx were listed. Table 1 provides a list of designated New York City landmarks in Manhattan that were at that time affiliated with African Americans.

Before the African Burial Ground was designated a New York City Landmark, 30 landmarks especially significant to African American history in Manhattan were listed. Most of these were places of worship (n = 12) or residences (n = 8). Other landmarks were places of entertainment (n = 4), meeting places (n = 2), an armory, a hotel, and the New York Public Library. The majority of designated landmarks were buildings constructed during the twentieth century (n = 19), and most landmarks (n = 25) were constructed after the Civil War. Unlike the African Burial Ground, none of the landmarks was established prior to the nineteenth century. The designation of the New York African Burial Ground as a landmark on New York State and federal lists provides additional legal protection to the site and restricts the potential for future negative impacts on the site. The African Burial Ground and the Commons Historic District was designated a New York City Landmark by the LPC on February 25, 1993 (Dunlap 1993:B3). The entire area that historically contained the African Burial Ground was proclaimed a National Historic Landmark on April 19, 1993 (NPS Archeology Program 2006).

Table 1. African American Affiliated Landmarks in Manhattan Identified as of 1992, Prior to the Designation of the African Burial Ground as a New York Landmark

New York Landmark	Construction Dates	Function
St. Patrick's Old Cathedral	1809–1815	place of worship
St. Peter's R. C. Church	1836–1840	place of worship
Oliver Street Baptist Church	1844–1845	place of worship
St. George's Church	1846–1856	place of worship
17 East 128th Street	1864	residence
Langston Hughes House	1869	residence
St. Andrew's Church	1872–1873	place of worship
Astor Row	1880–1883	residence
Metropolitan Baptist Church	1884–1885	place of worship
St. Martin's Episcopal Church Complex	1887–1889	place of worship
Church of St. Mary-the-Virgin	1894–1895	place of worship
New York Public Library	1903–1905	library
Regent Theater	1905–1916	entertainment
St. Paul's German Evangelical Church	1910	place of worship
St. Philip's Protestant Episcopal Church	1910	place of worship
Hotel Theresa	1912–1913	hotel
Apollo Theater	1913–1914	entertainment
Colonial Parkway Apartments	1916	residence
Roger Morris Apartments	1916	residence
Young Men's Christian Association Building	1918	meeting place
Town Hall	1919–1921	town hall
369th Regiment Armory	1921–1924	armory
Renaissance Theater and Casino	1921–1922	entertainment
Abyssinian Baptist Church and Community House	1922–1923	place of worship
Graham Court Apartments	1923–1937	residence
Mother Zion African Methodist Episcopal Church	1923–1925	place of worship
ANTA Theater	1924–1925	entertainment
Dunbar Apartments	1926–1928	residence
Young Men's Christian Association Building	1931–1932	meeting place
Harlem River Houses	1936–1937	residence

The Office of Public Education and Interpretation

The Office of Public Education and Interpretation (OPEI), headed by urban anthropologist Dr. Sherrill Wilson, was opened by the GSA in Lower Manhattan on May 20, 1993. The office was opened to fulfill GSA's public involvement responsibilities as outlined in the amended MOA for the project. The OPEI's purpose was to provide information to the New York community and the overall public about the burial ground and the ongoing research. To carry out this mission, Dr. Wilson and her staff created an educational program for schoolchildren of all grade levels as well as adults. These programs included site tours, slide presentations, and quarterly educators and public symposia. The OPEI created a Public Archival Reading Room of books, articles, and other sources about the burial ground, African and African American history, and other subjects, which was open to all visitors. In addition to operating an information desk in the lobby of 290 Broadway, the OPEI published a newsletter three times annually, which included periodic updates on the progress and results of the research. Between 1993 and 2006, the OPEI disseminated information to more than 100,000 people, including schoolchildren, church groups, and community organizations. Additionally, the OPEI administered a high school and college-level internship program, sponsored student writing competitions and community events, and trained many volunteers "to help inform local communities of issues and current events relating to the project" (La Roche and Blakey 1997:97). Formerly housed in the World Trade Center, the OPEI was later moved to 290 Broadway. The function of the OPEI was transferred to the NPS with the development of an interim interpretive center at 290 Broadway in 2006.

The Analytical Phase of the New York African Burial Ground Project

The GSA awarded the postexcavation analytical phase of the project to Howard University. It included laboratory analysis and interdisciplinary studies in history, archaeology, and skeletal biology. This phase of the research was managed by Dr. O. Jackson Cole (Executive in Charge, Howard University) and Dr. James A. Donaldson (Project Manager, Howard University). As previously mentioned, Dr. Michael Blakey (then at the Department of Sociology and Anthropology, Howard University) was the scientific director. Blakey "had responsibility for all project administration and scientific design, research, and reporting as well as public and client relations" (Blakey, Mack, Shujaa, et al. 2009:50).

Blakey assembled a diverse team of leading scholars in history, physical anthropology, and archaeology from nine universities, including Howard University. Many members of the research team were African American scholars with backgrounds in African Diaspora studies. Research team members were interested in applying a publicly engaged, biocultural approach to study of the site (Blakey 2009a:12).

Transfer of Human Remains to Howard University

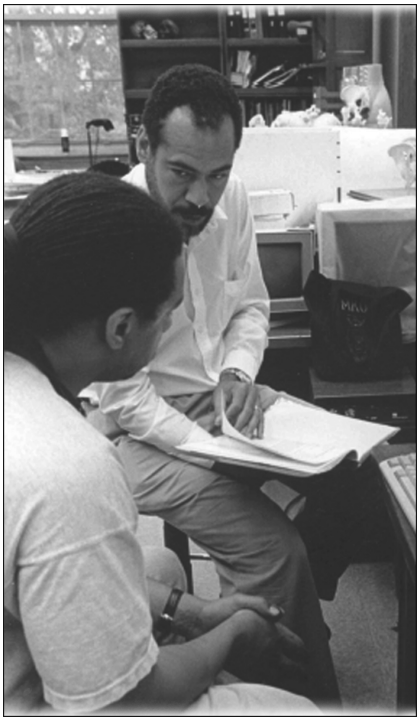
Human remains excavated from the New York African Burial Ground were brought to Howard University between August and November 1993. The transfer was overseen by a peer review panel and was discussed at a public forum in City Hall. Religious ceremonies surrounding the transfer included a candlelight procession at the New York African Burial Ground and a religious service at the Mariner's Temple Baptist Church (Frohne 2002:75). Blakey addressed participants at the ceremonies by saying, "our job [as scientists] is to sit at the feet of those that were enslaved. Our job is to restore them to who they were: their origins, age, culture, and work, and to restore their identities, which were buried and seemingly disguised from us forever" (quoted in Frohne 2002:75–76). The arrival of the remains was celebrated on November 5, 1993, at Howard University by an event called "The Ties that Bind" (Figure 6). The event included religious, academic, and cultural ceremonies; musical performances; a scholarly seminar on the African Diaspora; and a gala reception.

Skeletal Laboratory Analysis

Skeletal recordation was conducted in the W. Montague Cobb Biological Anthropology Laboratory of Howard University (Figure 7). The laboratory is a large, state-of-the-art facility equipped with advanced storage facilities, security, and environmental controls.

Mark Mack served as laboratory director, M. Cassandra Hill served as osteologist, and Reba Brewington

Figure 6. Night procession of The Ties That Bind ceremony marking the transfer of the New York African Burial Ground ancestral remains to Howard University in November of 1993 (photograph by Roy Lewis) (from Volume 1, Part 1 [Blakey 2009a:Figure 8]).



Project Director Michael Blakey discusses organization of the database with Data Systems Manager Douglas Fuller in the W. Montague Cobb Biological Anthropology Laboratory at Howard University (from Volume 1, Part 1 [Blakey, Mack, Shujaa, et al. 2009:Figure 11]).

Figure 8. (*Top left*) Allison Davis and Keisha Hurst take anthropometric measurements; (*bottom left*) safety equipment used in unwrapping burials; (*right*) laboratory director Mark Mack conducts dental recordation (from Volume 1, Part 1 [Blakey, Mack, Shujaa, et al. 2009:Figures 15 *(top left)*, 13 *(bottom left)*, 27 *(right)*]).

Figure 9. Osteological Technician Assistant Joseph Jones involved in cleaning and reconstruction (from Volume 1, Part 1 [Blakey, Mack, Shujaa, et al. 2009:Figure 14]).

served as office manager and administrative assistant. Numerous individuals, including many Howard University physical anthropology students, served as osteological technicians, osteological technician assistants, and research assistants (for descriptions of specific duties, supervision, and personnel, see Chapter 4 of the skeletal biology volume of this series [Blakey, Mack, Shujaa, et al. 2009]). Other positions at the lab included medical photographer, data systems manager, botanist, conservator, and secretary (Figure 8).

Many skeletons arrived in the laboratory encased in blocks of soil. Skeletal material was carefully cleaned of soil matrix and photographed regularly throughout the cleaning process (Figure 9). Most skeletal elements were removed complete from soil matrices. Fragmented skeletal elements were reconstructed when possible using polyvinyl acetate so that more accurate measurements and assessments could be made. All complete and incomplete skeletal elements and dentition were inventoried for each burial according to the *Standards for Data Collection*

from Human Remains (Buikstra and Ubelaker 1994) (detailed laboratory methods are provided in Volume 1 of this series, *Skeletal Biology of the New York African Burial Ground* [Blakey and Rankin-Hill, eds. 2009]). Inventory information was used to assess the relative state of preservation for each individual and to assess amenability of observable skeletal elements for analysis (Blakey, Mack, Shujaa, et al. 2009:54). Dentition "was cleaned, identified, assessed, and curated separately by the laboratory director and his assistants" (Blakey, Mack, Shujaa, et al. 2009:60).

Inventoried individuals were tested for fungus infestation and "stored in airtight interior steel cabinets labeled with OSHA-required biohazard signs" (Blakey, Mack, Shujaa, et al. 2009:49). Twenty-five skeletons were quarantined owing to fungus infestation, and several were isolated because of their proximity to one of the affected skeletons. Quarantined skeletons were evaluated by project botanists, treated with ethanol, and processed according to University Biohazards Committee guidelines. Six individuals remained quarantined due to infestation with pathogenic *Blastomyces* fungus or storage in close proximity to hazardous specimens (Blakey, Mack, Shujaa, et al. 2009:52–53).

Data collected during laboratory recordation included on the order of 250,000 observations on skeletal elements or dentition from 391 individuals, 55,000 medical photographs, 2,000 X-ray radiographs, and a small number of cranial computed tomography (CAT) scans. Numerous anthropological measurements were made on cranial and postcranial elements. Damaged, warped, or incompletely preserved elements were not measured if it was deemed that an accurate measurement was unlikely. Measurements for immature (<20 years) and mature individuals were made using separate forms. Two sets of measurements were taken by different technicians or on different dates in order to maintain quality control and assess the effect of intra- and inter-observer variation on analysis. A third set of measurements was taken when a variance of more than 5 percent from the average of two measurements was observed. Variance more than 5 percent was rarely observed, and an average of the two measurements was used for analytical purposes (Blakey, Mack, Shujaa, et al. 2009:55).

Sex was determined for each individual by taking the average of ordinal scores assigned for each individual to cranial, pelvic, and other postcranial dimensions. "Each of 10 cranial, 7 pelvic, and 7 other postcranial characteristics were assigned a score on a scale of 1–5, with 1 demonstrating typical female configuration, 5 marking male morphology, and 3 being indeterminate" (Blakey, Mack, Shujaa, et al. 2009:55). Sex was determined for most individuals by taking the average score of all attributes. In cases where individuals exhibited a combination of male- and female-associated characteristics, the most reliable indicators of sex were used, and a rationale for the determination was provided. Pelvic characteristics are generally considered most reliable in sex determination. Other postcranial characteristics proved to be more variable in the sample and were generally given less weight than pelvic characteristics (Blakey, Mack, Shujaa, et al. 2009:55).

Age at death was based on multiple characteristics of bones and teeth. The researchers attempted to assign both an age range and a mean age at death using composite scores for different indicators of age, but in cases of poor preservation, only a minimal age was estimated. Age estimations were based on different characteristics for mature and immature remains. Composite age was determined for immature remains using indictors of dental development, degree of fusion of epiphyses, primary centers of ossification, and diaphyseal lengths of long bones (Blakey, Mack, Shujaa, et al. 2009:57). Age-at-death for mature remains was estimated by evaluating age-related dental attrition, osteoarthritic change, cranial sutures, sternal rib ends, morphological change in pubic symphyseal faces, and age-related change in auricular surfaces of the os coxae (Blakey, Mack, Shujaa, et al. 2009:59). The researchers took into account the fact that strenuous forcible labor could delay development or cause premature degenerative changes. When different indicators of age were in close agreement, all indicators were used to calculate a composite age range. Unusually broad ranges were estimated when only one indicator, such as cranial suture closure, could be used. For statistical analysis, a mean of the composite age range was used.

Skeletal remains for each burial were also assessed for "pathologies, anomalies, and nonmetric genetic traits in bone" (Blakey, Mack, Shujaa, et al. 2009:61). Skeletal elements were described according to classification schemes provided in the *Standards for Data Collection from Human Remains*. Pathologies included fractures, dislocations, arthritis, abnormalities in the shape or size of skeletal elements, and abnormalities in bone loss or bone formation. Particular attention was paid to vertebral pathology,

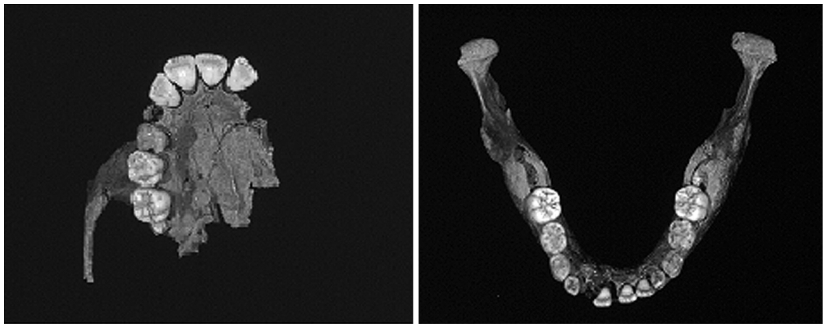


Figure 10. Examples of the photographic record (Burial 95, a subadult aged 7–12 years) (from Volume 1, Part 1 [Mack et al. 2009:Figure 65]).

periostitis, porotic hyperostosis, and musculoskeletal stress markers. Dentition for each burial was inventoried, measured, and assessed for "morphological traits, attrition rates, enamel defects, culturally induced alterations, and pathological observations" (Blakey, Mack, Shujaa, et al. 2009:60). Particular attention was paid to hypoplasias, tooth loss, and caries formation. Photographs (Figure 10) were taken to document each individual, and "radiographs were taken of useful crania and long bones to discover pathologies that were not readily apparent by visual observation" (Blakey, Mack, Shujaa, et al. 2009:62). After all measurements, photographs, and assessments had been made, bone and dental tissue samples were taken "for histology, chemistry, DNA, histomorphometry, and curation" (Blakey, Mack, Shujaa, et al. 2009:63). In addition, "samples of right femora, humeri, fibulae, and ribs were taken according to *Standards* protocol for sectioning" (Blakey, Mack, Shujaa, et al. 2009:63).

Nonskeletal Laboratory Analysis

At the close of fieldwork in September 1992, the GSA provided laboratory space in the U.S. Customs-House World Trade Center Building No. 6 for the analysis and storage of nonskeletal material. John Milner Associates, Inc., directed and staffed the laboratory, which was headed up initially by Project Conservator Gary McGowan as laboratory director. Nonskeletal materials were processed and analyzed at the subbasement-level laboratory at 6 World Trade Center. In the laboratory, researchers developed provenience controls, implemented appropriate cleaning, conservation, and storage methods for nonskeletal materials; inventoried artifacts; and processed soil samples (detailed laboratory methods are described in Volume 2 of this series, *The Archaeology of the New York African Burial Ground* [Perry, Howson, and Bianco, eds. 2009a]). Conservation was conducted by conservators Gary McGowan and Cheryl LaRoche of John Milner Associates, Inc. Warren Perry (Associate Director for Archaeology for the Howard University team, Central Connecticut State University) supervised laboratory processing beginning in 1996, along with Laboratory Director Leonard Bianchi of John Milner Associates, Inc. Jean Howson became codirector of the laboratory in 1998. Selected artifacts were photographed by staff of John Milner Associates, Inc., from 1992 through 1995.

The researchers used multiple lines of evidence to infer formation processes, reconstruct the historical-period environmental context, document overall site stratigraphy, assess preservation, develop a relative dating scheme for burials, and document variation in burial practices and material culture. They also assembled historical information in order to reconstruct a chronology of site use as well as to identify historical-period African diasporic burial practices that could have been implemented at the African Burial Ground. In addition to human burial, formation processes at the site included disturbance processes, such as the construction of dwellings, construction of municipal and industrial facilities, waste disposal, grave robbing, and landfilling (Howson and Bianchi 2009a:73–74) (Figure 11). Nonburial features and artifacts not associated with burial features are discussed in a separate report produced by John Milner Associates, Inc. (Cheek and Roberts 2007).

Reconstructing overall site stratigraphy was complicated by limited documentation in the field of stratigraphic profiles or the historical-period ground surface. Change in the relative elevation of burials across the site conforms to historically documented change in the slope of the original ground surface, but detailed stratigraphic information was generally lacking (Howson and Bianchi 2009a:81). Preserva-

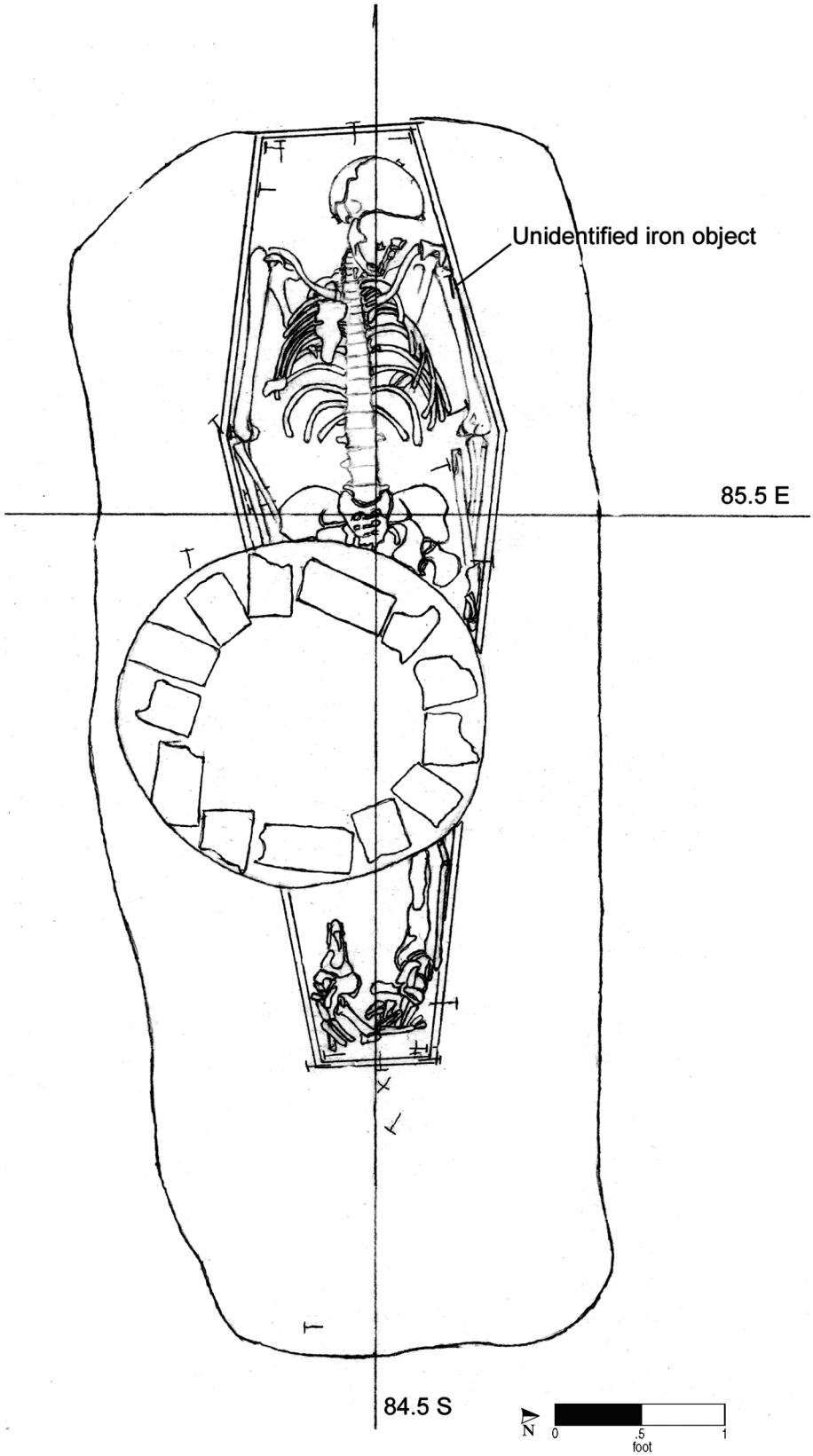


Figure 11. Sketch map of Burial 213, showing disturbance by a nineteenth-century brick-lined drain (drawn by W. Williams and M. Schur) (from Volume 2, Part 2 [Perry, Howson, and Bianco, eds. 2009c:292]).

tion was assessed based on the degree of damage to burials, the presence or absence of skeletal elements, and the degree to which skeletal elements were disarticulated or disturbed. Often, differential preservation based on variation among burials in bioturbation, hydrology, or soil chemistry could not be assessed, owing to limited information. It was thus difficult to assess the effects of differential preservation on artifact distribution or burial attributes (Howson and Bianchi 2009a:84).

A relative dating scheme was developed. Four periods of site use were inferred using the location of historical-period fence lines, variation in historically documented landownership and land use, patterns in animal-bone dumping from a nearby historical-period tannery, patterns in pottery-waste dumping from a nearby historical-period pottery (ca. 1728–1765), artifact dating, burial stratigraphy, and variation in coffin shape. Burials were assigned to one of four different temporal groups: Early Group (pre–ca. A.D. 1735), Middle Group (ca. A.D. 1735–1760), Late-Middle Group (ca. A.D. 1760–1776), and Late Group (ca. A.D. 1776–1795) (Howson, Perry, et al. 2009:87–105; Perry, Howson, and Holl 2009a, 2009b, 2009c, 2009d) (see Appendix B; Figures 12–15). Material-culture studies focused on coffin attributes (Howson and Bianchi 2009b), pins and shrouds (Howson 2009), buttons and fasteners (Bianchi and Bianco 2009), beads and other adornment (Bianco et al. 2009), and rare items such as coins, shell, or smoking pipes (Perry and Woodruff 2009).

On September 11, 2001, the twin towers of the World Trade Center were attacked and destroyed by terrorists. The New York African Burial Ground laboratory "was left partially intact following the collapse of the towers and other surrounding buildings" (Howson, Bianchi, and Perry 2009:28). Remarkably, many documents and boxes of artifacts survived the attack and were salvaged through the coordinated efforts of the Federal Emergency Management Agency and the GSA. Regrettably, some artifacts, samples, and project records were destroyed during the collapse. These are listed in Table 6 of the archaeology volume of this series. The OPEI was also in the World Trade Center. Materials housed at the OPEI, such as artifact slides, could not be salvaged (Howson, Bianchi, and Perry 2009:Table 6). All of the personal items found with the individuals in the graves were not at the Customs House laboratory on September 11. These artifacts had been removed to Artex, a storage facility for art objects, etc., in Landover, Maryland, in preparation for the reinterment that was being planned at the time but not actually undertaken until 2003. Salvaged materials are recataloged in Volume IV of John Milner Associates Inc.'s report on the secular use of the New York African Burial Ground (Cheek and Roberts 2007:xxi).

The U. S. Army Corps of Engineers, St. Louis District, Mandatory Center of Expertise for the Curation and Management of Archaeological Collections, prepared the collection for curation at the Schomburg Center. The collection includes the archaeological materials that were not reinterred, digital images, photographs, slides, videos, and documentation from the entire project. The osteological samples are being curated by researchers at the W. Montague Cobb Laboratory at Howard University.

Historical Research

The historical component of the New York African Burial Ground Project was led by Dr. Edna Greene Medford, Howard University Associate Professor of History and Director of History for the project. Many prominent African Diaspora researchers and Howard University history students contributed to the historical research, which was much more expansive and intensive than historical research for other CRM projects. The first goal of the historical research was to develop a historical context for interpreting the origins, backgrounds, and experiences of individuals interred in the African Burial Ground. The second goal was to provide a broader understanding of the daily life of enslaved and free people in New York. Because of the broad scope of African Diaspora studies and the diverse origins of individuals interred in the African Burial Ground, historical research focused on three geographic regions: West and West-Central Africa, the Caribbean, and New York City. Historical information on disease environments, diet, work, and social customs and practices was developed for all three regions. In addition, the Africanist studies focused on the question of origins, processes of initial enslavement in West and West Central Africa, and the identification of specific groups and ethnicities whose members were likely to have been forcibly migrated to New York City. Studies in the Caribbean focused on similar issues, but included a special focus on activities and experiences of enslaved laborers on Caribbean plantations prior to being forcibly migrated to New York City. As Medford (2009:xviii) notes:

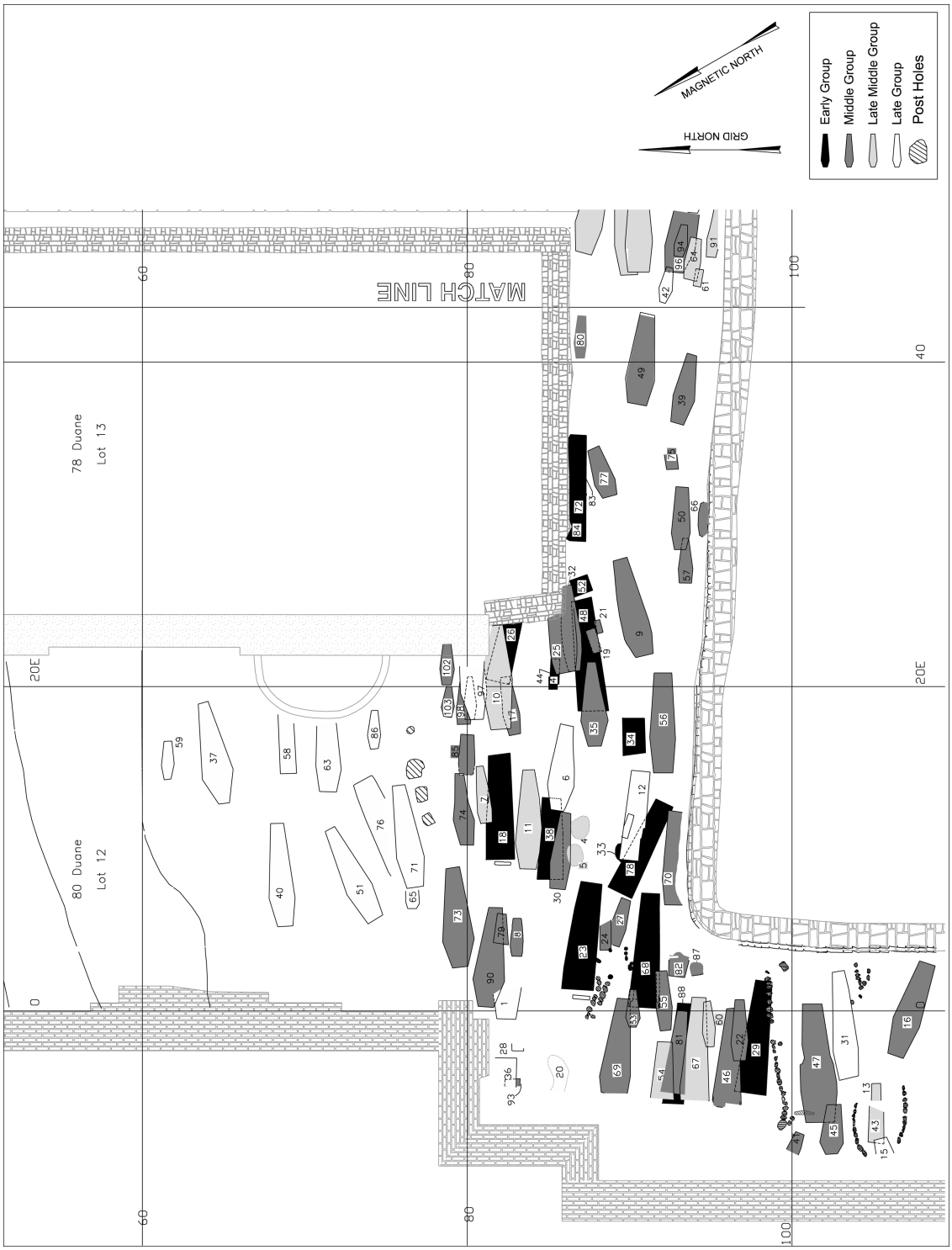


Figure 12. Western area of the New York African Burial Ground excavation (from Volume 2, Part 1 [Howson, Perry, et al. 2009:Figure 50a]).

Figure 13. West-central area of the New York African Burial Ground excavation (from Volume 2, Part 1 [Howson, Perry, et al. 2009:Figure 50b]).

The New York–based research focused on cultural practices; living conditions; resistance; the variety and methods of labor from an age, gender, and seasonal perspective; and other factors that would place the burial ground population in a historical context. The wide range of documentary evidence that was consulted includes municipal and colonial office records, court cases (both criminal and civil), laws, medical logs, diaries and other personal papers, wills, and newspaper advertisements that announce sales of enslaved people and offer a glimpse of the persistence of African peoples in their resistance to slavery.

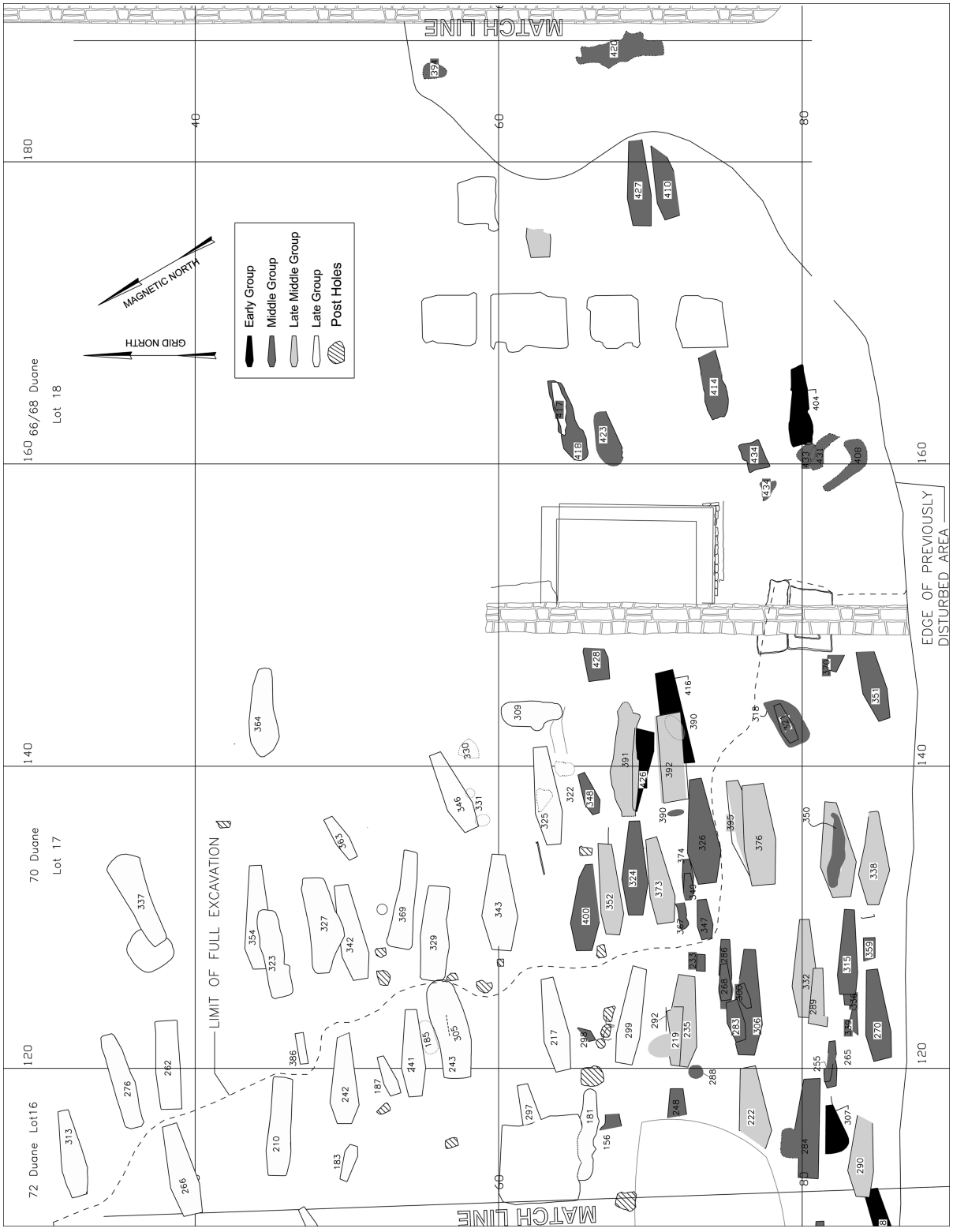


Figure 14. East-central and Lot 18 areas of the New York African Burial Ground excavation (from Volume 2, Part 1 [Howson, Perry, et al. 2009:Figure 50c]).

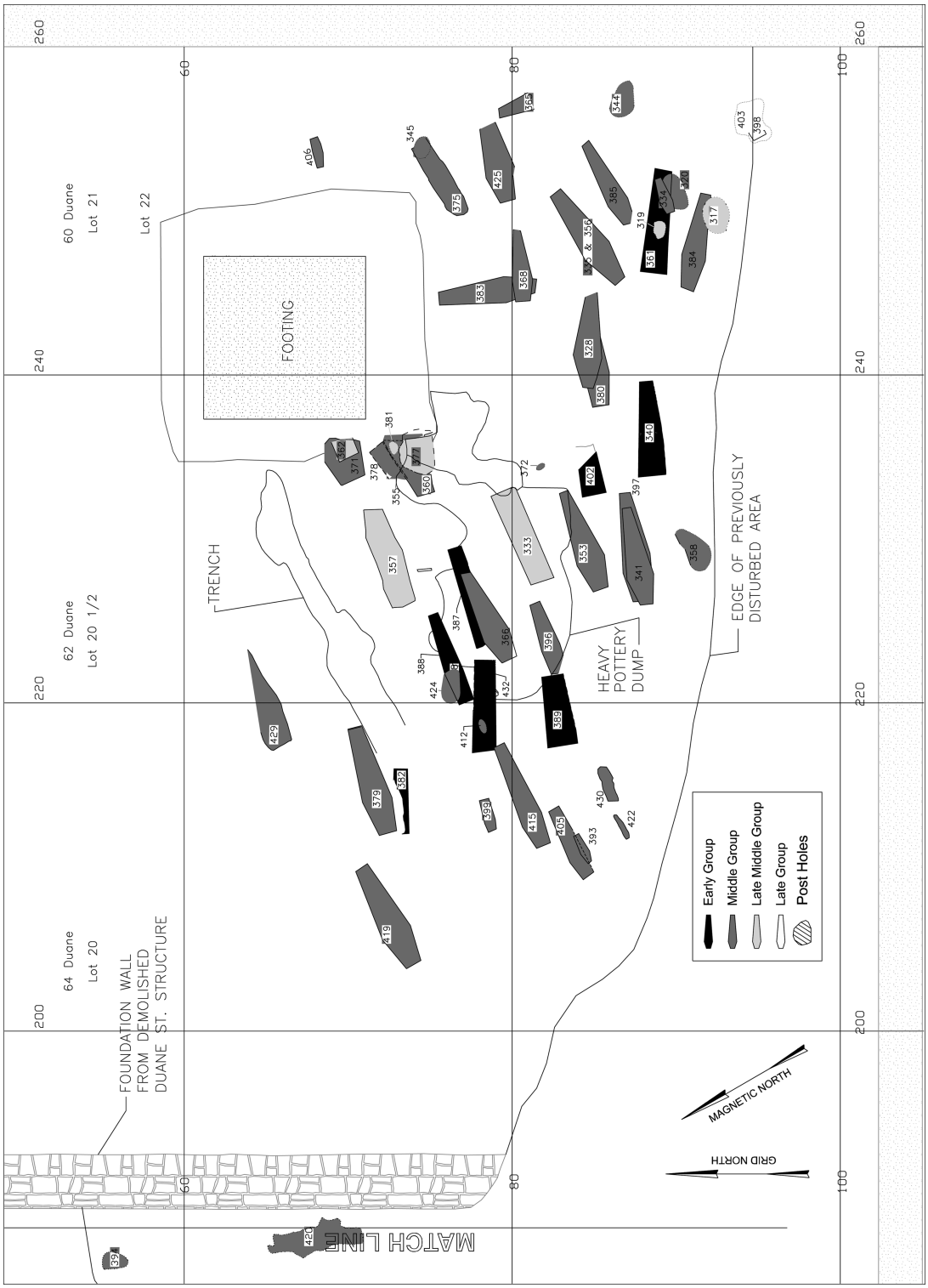


Figure 15. Eastern area of the New York African Burial Ground excavation (from Volume 2, Part 1 [Howson, Perry, et al. 2009:Figure 50d]).

Figure 16. Mother Delois Blakeley heads the procession of the coffins from Wall Street to the African Burial Ground. Photograph by Sherrill D. Wilson (from Volume 2, Part 1 [Perry 2009:Epilogue]).

Historical researchers included Allison Blakely, Ph.D. (Boston University); Emilyn L. Brown, MA (Independent Researcher); Selwyn H. H. Carrington, Ph.D. (Howard University); Michael Gomez, Ph.D. (New York University); Linda Heywood, Ph.D. (Boston University); Jean Howson, Ph.D. (Independent Researcher); Edna Greene Medford, Ph.D. (Howard University); Arnold Taylor, Ph.D. (Emeritus Professor, Howard University); John Thornton, Ph.D. (Boston University); and Jeanne Toungara, Ph.D. (Howard University). Numerous graduate student researchers and undergraduate assistants provided research assistance. Special assistance was provided by Sherrill Wilson, Ph.D., who directed the Office of Public Education and Information for the project. Due to the broad scope of the research, primary sources from archives in Angola, England, France, the Netherlands, New York, New Jersey, Pennsylvania, Portugal, and Wales were consulted. The results of this research were published as Volume 3 of this series, *Historical Perspectives of the African Burial Ground: New York Blacks and the Diaspora.*

Reinterment

According to the amended MOA, human remains and artifacts directly associated with burials were to be reinterred. Reinterment took place at the New York African Burial Ground in October 2003 (Figure 16). As the eighteenth-century ground surface was not documented and the precise provenience of artifacts in grave shafts was not recorded, it was not often possible to discern which artifacts were placed on coffin lids or at the surface of graves. Artifacts that were determined to have been placed on coffin lids, materials within coffins or directly associated with skeletal material, and samples of coffin wood were clearly associated with the burial and were reinterred. Most of the materials discovered within grave shafts were remnants of scattered trash, including waste material from nearby industries such as the historical-period pottery and tannery facilities. To the researchers, most materials in the grave shaft "represent depredations on the cemetery that occurred during the period of its use" (Howson, Bianchi, and Perry 2009:31). After discussions with members of

the public, Howard University, Advisory Council on Historic Preservation, LPC, NYSHPO, and the NPS, the project archaeologists decided that grave-shaft materials would not be reinterred. To the researchers, "these materials were not deliberately placed with the deceased, do not represent actions on the part of mourners, and lacked spiritual meaning at the time of interment" (Howson, Bianchi, and Perry 2009:31). Some members of the descendant community felt, however, that regardless of original intent, the "presence of these materials in the sacred ground of the cemetery over the past 200–300 years had in fact imbued them with a spiritual essence by virtue of their close contact with the remains of the ancestors" (Howson, Bianchi, and Perry 2009:31). Nonskeletal materials that were not reinterred were prepared for curation and "transferred to the custody of the Army Corps of Engineers, acting as GSA's technical representative, on February 27, 2006" (Howson, Bianchi, and Perry 2009:31). Small samples of human bone were retained for future analysis. On the same day, President George W. Bush proclaimed a 15,000-square-foot portion of the site as the African Burial Ground National Monument (White House, Office of the Press Secretary 2006).

The Schomburg Center, working in coordination with the GSA, planned the reinterment ceremonies. Four individuals—an adult male, adult female, a male child and a female child—representing the population interred at the burial ground traveled from Howard University in Washington, D.C., to New York City, with stops in Baltimore, Maryland; Newark, Delaware; Philadelphia, Pennsylvania; and Newark, New Jersey. Once at Wall Street, these individuals led the procession of carriages up Broadway to the burial ground for reinterment. The coffins were placed in crypts, and a vigil was held until the following day, when the crypts were lowered into the ground after a final ceremony.

Colonial Williamsburg was contracted by the GSA to replicate artifacts found in direct association with individuals. It was determined that some items, like beads and coins, for which actual or similar items could be purchased, would not be replicated. From the other artifacts, Colonial Williamsburg provided input on what it could replicate and selected a number of items, including metal, bone, and wood buttons; the ear bob; rings; enamel cufflinks; straight pins; and glass paste rings. Three copies of each item or group of items were made by Colonial Williamsburg. All of the purchased items and one set of the replicated artifacts would be used in the interpretive center. The remaining sets of replicated items were included in the archaeological collection curated at the Schomburg Center (Howson, Bianchi, and Perry 2009:31).The excavated individuals, along with associated grave goods, were reburied in beautifully carved cedar and walnut coffins made in Ghana (Figure 17).

Figure 17. Wooden coffins, hand-carved in Ghana, held the ancestors' remains for reburial at the New York African Burial Ground. Photograph by Anne and Jon Abbott (from Volume 2, Part 1 [Perry 2009:Epilogue]).

Chapter 3

The African Burial Ground in Historical and Archaeological Context

A Publicly Engaged Biocultural Approach to Research

One of the strongest and most innovative aspects of the New York African Burial Ground project has been the project teams' publicly engaged approach to investigating the origins, lives, and deaths of African New Yorkers within a broad biocultural and diasporic context. With Blakey and John Milner Associates, Inc.'s research design, the scope of the project was expanded to include not just the local or regional historic context, but also the broader diasporic context of Africans in Africa and in the Americas for a period that encompassed the formation, use, and closing of the African Burial Ground.

Contextualizing the burial ground from a geographically, historically, and archaeologically broad, diasporic perspective meant that the researchers had to bring together traditions of scholarship that had developed separately and had become segmented. The research team's approach was without precedent in American archaeology and required the intertwining of African American intellectual traditions, including vindicationist approaches to history, with the archaeology and bioarchaeology of the African Diaspora. Blakey (2009c:18) has observed that

> diasporic studies developed directly from the history of African American and other diasporic scholarship and rarely incorporated the tools of archaeology and biology. Bioarchaeology developed from two anthropological disciplines that, like biohistory, had evolved from Euroamerican and other traditions of 'white' scholarship that rarely incorporated the social science, humanistic, and activist understandings of diasporic studies . . . These segmented trends, fostered by a racially segmented American society, have recently been merged in our study of the eighteenth-century African Burial Ground in the City of New York.

The New York African Burial Ground project thus sought "to resolve those differences with a synthesis of the compatible aspects of diasporan and bioarchaeological theory and method" (Blakey 2009c:26).

The theoretical approach employed by the researchers is fundamentally based in analyzing and interpreting documents, artifacts, features, and human remains in terms of the appropriate historical, cultural, and bioarchaeological contexts. The descendant community and project researchers felt that this synthetic diasporic and biocultural perspective was most relevant and essential to placing the African Burial Ground in historical context. Given the diverse origins and life experiences of enslaved African New Yorkers and the sweeping transatlantic processes of enslavement and forcible migration, the project research went far beyond the geographic limits of Manhattan, the northeastern United States, or even North America. It was imperative that the African Burial Ground be placed in a broader historic context and compared to other investigated mortuary sites of the African Diaspora, such as those previously investigated in South Carolina, Maryland, Texas, Louisiana, Barbados, Jamaica, Ghana, and Angola.

As Perry, Howson, and Bianco (2009:374) suggested, the African Burial Ground should "be analyzed within a worldwide context. This site did not exist in a historical, geographic, or cultural vacuum . . . The burial ground adds to a growing multidimensional perspective on Africans during the seventeenth and eighteenth centuries, but it bears closer comparison to other sites in Africa, North and South America, and the Caribbean." In a similar vein, Medford (2009:xviii)

observed that "in the place that was New Amsterdam, and later became known as New York, [the people interred in the African Burial Ground] fashioned an existence shaped as much by global economic and political interests as by local ones." The broad comparative context in which the African Burial Ground is situated enabled the researchers to develop a much richer and more complete understanding of the African Burial Ground than could have been achieved with a more restricted geographic, historical, and intellectual scope.

The African Burial Ground was the final resting place for thousands of people made captive by processes of enslavement. As such, the New York African Burial Ground Project sought to delineate the history of slavery in New York City and place the City into the larger context of slavery in the Americas and the Atlantic trade in enslaved Africans. The researchers stress, that contrary to popular belief, slavery was deeply rooted in the history of New York City. Enslaved African labor formed the backbone of what was to become one of the world's greatest cities. From the founding of New Amsterdam in 1624 and up to the statewide emancipation of enslaved laborers on July 4, 1827, much of life in the settlement was organized around the exploitation and control of enslaved African labor. The African Burial Ground was actively used for burial from at least 1712 through 1795 and could have been in use as early as ca. 1650. During the period the burial ground was in use, no sector of the economy or domestic life was unaffected by slavery or the racial concepts that developed alongside slavery in New York, as households and merchants throughout the city sought economic gain through the forcible labor of enslaved Africans.

Despite the deep involvement of enslaved African New Yorkers in the political economy of New York City, few archaeological contexts other than the New York African Burial Ground have revealed new findings on the lives and lifestyles of African New Yorkers. Much work remains to be done in reinterpreting earlier finds that could be related to New York African activities and in investigating additional archaeological contexts where New York Africans were likely to have worked and lived. The researchers' publicly engaged biocultural approach to investigating the African Burial Ground demonstrates the need to involve the descendant community in deciding the direction of research and expanding the scope of investigation beyond the local and regional context. With the expressed interest of the descendant community to guide them, the researchers contextualized the site broadly in terms of the history, culture, and biology of the African Diaspora in West and West Central Africa, the Caribbean, and New York. This chapter provides a basic historic context for the African presence in New York, relying especially on the myriad insights and observations supplied by Volume 3 of this series, *Historical Perspectives of the African Burial Ground* (Medford, ed. 2009) and the documentary evidence presented in Volume 2, *The Archaeology of the New York African Burial Ground,* Chapter 2 (Howson, Bianco, et al. 2009). Information discussed includes the role of New Amsterdam and New York in slavery and the trade in enslaved Africans, the role of African New Yorkers in settlement and in the formation and use of the African Burial Ground, and the role and visibility of African New Yorkers at contemporaneous archaeological sites in Manhattan. Subsequent chapters place the project findings within a larger diasporic context in terms of the project's main themes: origins, daily life, transformations, and resistance.

Slavery in New York

The foundations of modern American life are based in a deeply entrenched history of slavery. During the period the African Burial Ground was in use, the British and Dutch colonies—including Dutch New Amsterdam and, later, British New York—were heavily involved in slavery. New York was, in a sense, the crucible of northern slavery. Of the northern colonies, New York had the most enslaved laborers, was heavily involved in the trade in enslaved Africans (along with Rhode Island and New Jersey), depended on enslaved labor for its economic infrastructure, and was embroiled in slavery for the longest period. In short, slavery was integral to the development of New York as a colony and growing commercial center (Harris 2003; Hodges 1999; Lydon 1978; Matson 1998; McManus 1966).

For many people, historical-period slavery in North America conjures images of enslaved Africans laboring in cotton fields on southern plantations. Cotton, however, only became a major North American crop in the nineteenth century, and slavery was by no means confined to the southern colonies. Slavery in the Americas assumed many different guises and configurations and had much deeper roots than is generally acknowledged (Conniff and Davis 1994, 2003; Davis 1979; Singleton 1995). Today, U.S. history

textbooks characterize slavery in the United States as mostly a southern phenomenon associated with large-scale plantation farming. Northern slavery is omitted or glossed as a gentler, less conspicuous institution. Prior to the discovery of the New York African Burial Ground, few New Yorkers were cognizant of New York's complicated and insidious historical involvement with slavery. Even now, public awareness of the slavery that took place in New York is minimal (Prince 2006). The discovery of the African Burial Ground has heightened awareness locally on New York, but in many parts of the country, slavery remains synonymous with the South.

Although slavery in New York differed in important ways from slavery on southern plantations, the horrors and abuses of slavery were central components of New York life for well over 200 years, from shortly after New Amsterdam's founding in 1624 to well after the official statewide emancipation of enslaved laborers in 1827 (Davis 1979). Enslaved laborers in the South were generally far more numerous than in the North, and on many southern plantations, enslaved laborers often outnumbered owners or overseers. In New York City, the population of enslaved Africans never exceeded a quarter of the population, and many enslaved laborers performed multiple tasks other than farmwork (Medford, ed. 2009; Rankin-Hill et al. 2009). At the same time, enslaved laborers in the urban setting of Manhattan lived at much higher population densities than enslaved laborers who lived in more-extensive, rural settlement patterns characteristic of southern plantations (Davis 1984). During the British occupation, many households in Manhattan held enslaved laborers (Medford, ed. 2009), with at times "a rate of involvement in the institution greater than that of whites in South Carolina or Virginia" (White 2005:168).

New York City's involvement with slavery was shaped by New York City's role as an important commercial port for the Atlantic shipping industry and a major participant in the provisions trade with the Chesapeake colonies and the West Indies. The provisions trade involved the supplying of foods, such as grain and livestock; lumber; and value-added products, such as beer and snuff, to other colonies in exchange for plantation products such as sugar and rum, European goods, and enslaved Africans. New Yorkers imported enslaved Africans to New York (1) to contribute labor to diverse local industries (a number of which were involved with adding value to raw materials, such as grain and tobacco, that were shipped to other regions); (2) to supply domestic laborers to New York households; (3) to speculate on the buying and selling of enslaved Africans in the trade with other colonies; and (4) to support New York's lucrative shipping industry (Matson 1998; Medford, Brown, Carrington, et al. 2009a). Initially, many tasks performed by enslaved laborers in Dutch New Amsterdam (1624–1664) were farming and building tasks that were necessary to build and sustain the growing settlement. As New York City grew into a commercial port during the late-seventeenth and eighteenth centuries, many of the tasks performed by enslaved laborers in New York were intimately tied to New York's involvement with Atlantic maritime trade—coopering, sail making, porting, shipbuilding, and sailing were principal occupations of enslaved laborers (Medford, ed. 2009). For instance, Foote (2004:201) has reported that "by the eighteenth century, black sailors were approximately 40 percent of the British merchant marine." Enslaved females and children supported many New York households, performing all the domestic chores—such as sewing, cooking, cleaning, caring for children—necessary to run households and to support household mercantilism. With the exception of jobs like constable or lawmaker, enslaved Africans performed almost every conceivable occupation performed in New York during the late-seventeenth and eighteenth centuries. To name a few, enslaved laborers worked as blacksmiths, bakers, butchers, brewers, bolters, barbers, tailors, farmhands, dockworkers, jewelers, carpenters, rope makers, lumberjacks, and builders (Medford, ed. 2009).

While the African Burial Ground was in use, New York merchants, artisans, and households came to depend heavily on enslaved labor. In 1703, for instance, 40 percent of New York households overall held enslaved Africans with the rate and nature of involvement varying across the city (Medford, ed. 2009). Of households in the city's five wards in 1703 (East, West, North, South, and Dock), more than half in the East Ward held at least one enslaved African, mostly adult males. Sixty percent of households in the South Ward held at least one enslaved African, many of them women forced into domestic service. The rate of involvement was greatest in the Dock Ward, where 70 percent of households, mostly those of English and French merchants, held enslaved Africans. The rate of household involvement was lowest in the North and West Wards, where 20 and 30 percent of households, respectively, held at least one enslaved African. Outside the city, at farms in the Harlem and Bowery neighborhoods, around 60 percent of

households, most of them Dutch, held enslaved Africans, three per household on average (Lepore 2005). White (2005:168) has suggested that the rate of white households' involvement in slavery continued to be high almost a century later, with 4 of 10 households within a 10–15-mile radius of New York City holding at least one enslaved African during the 1790s. Within the city, over 20 percent of white households in 1790 used some form of African American labor, and most of these (18 percent of white households) depended on enslaved labor. By 1810, 10 percent of white households were depending more on the labor of free African New Yorkers, and enslaved labor was used in smaller percentages (around 6 percent) of white households (White 1991:51, Table 11). Part of this decline in the exploitation of enslaved labor probably resulted from the gradual emancipation of enslaved laborers after 1799.

Slavery in New York began in 1625 or 1626, shortly after the initial settlement of New Amsterdam by Dutch fur traders in 1624. Slavery was fundamental to New York's labor economy during multiple political stages—the Dutch settlement (1624–1664), British rule (1664–1776), and after the Revolutionary War (1776–1783), at which time New York joined the federal constitutional republic of the United States of America. Prior to statewide emancipation in 1827, only during the Revolutionary War was there a partial and incomplete hiatus in enslavement. Ironically, most enslaved Africans in New York City were freed from the shackles of bondage during this period not to help the American freedom fighters but to support the British troops who occupied New York to quash the American Revolution (Hodges 2005; Medford, ed. 2009). After the Revolutionary War, the British helped more than 3,000 loyalist blacks emigrate to Nova Scotia, New Brunswick, England, and Sierra Leone (Dodson et al. 2000:39; Foote 2004:217) (see Chapter 7). As Foote (2004:221) has lamented, for New York African refugees of the Revolutionary War, "it was their relocation to the British side, not the long march toward the fulfillment of liberal democracy in the United States, that paralleled the passage from slavery to freedom." In post-Revolutionary New York, slavery in many ways returned to its former state. Just 5 years after the close of the Revolutionary War, as the New York legislature banned the export of enslaved laborers from New York and granted freedom to those who had been illegally sold (Dodson et al. 2000:50), it also "reaffirmed the 1730 slave codes" (Hodges 1999:169, 2005).

In New York City, religious and moral arguments for the abolition of slavery were advanced by the mid-eighteenth century, but political and legal advances only began to appear by the end of the century. Even these were difficult compromises that prolonged the suffering of those who would be free. For instance, in the 1740s, a religious movement called the Great Awakening elevated Africans, in the eyes of its Euroamerican adherents, to the same moral stature as Europeans and questioned the morality of slavery (Harris 2003). Unfortunately, this perspective was not entirely universal, even among enslaved Africans. In one rare case, the African-Dutch theologian Jacobus Eliza Capetein argued in his 1742 University of Leiden dissertation that "slavery saved Africans from sin by exposing them to Christianity, and that there was no explicit scriptural demand to free" enslaved Africans (Harris 2003:51–52). The Society of Friends, or Quakers, in 1770s New York and Philadelphia began to "eject slaveholders from their congregations" (Harris 2003:5). Even then, New York Quakers were the last Quakers in the northern colonies to divest themselves completely of enslaved laborers, and despite moral opposition to slavery, Quakers never invited African Americans to join their congregations (Harris 2003).

In 1785, prominent members of the Church of England and Quakers, such as John Jay and Alexander Hamilton, formed the New York Manumission Society (Harris 2003:56; Hodges 1999). The society offered legal aid, fought to protect fugitive Africans from bounty hunting, and in 1787 established the African Free School, a single-room school for boys and girls at 245 William Street (Dodson et al. 2000). Because of economic and political concerns, members of the New York Manumission Society generally favored gradual, rather than rapid, abolition of slavery. Consisting of elite members of Euroamerican society, the New York Manumission Society was also politically and economically conflicted in its motivation to combat slavery in New York. For instance, in his 1774 *Address to the People of Great Britain,* founding member John Jay—who later served as the first Chief Justice of the United States—accused the British government of political enslavement, even as he himself was guilty of enslaving Africans (Dodson et al. 2000; Harris 2003).

The transatlantic trade in enslaved Africans ended before citizens agreed to halt enslavement and captivity in their own local communities. Internationally, legal tides started to shift in opposition to slavery

during the last quarter of the eighteenth century. In the 1772 *Somerset* decision, for instance, Lord Chief Justice Mansfield decided "that slavery could only be supported by positive law, which England lacked" (Foy 2006:71). As a result, "slaves through the colonies came to believe, as did many of their masters, that if a slave reached Great Britain he or she would be freed" (Foy 2006:72). In New York, legal steps to eliminate the trade in enslaved Africans and initiate gradual emancipation began in the late 1780s and 1790s, concomitant with Britain's initial efforts to suppress this form of trade. In 1785, the New York State legislature passed a bill intended to abolish slavery, but the bill was rejected by the Council of Revision because of a number of extra clauses designed to prevent black suffrage, interracial marriage, and the right to testify against whites (Hodges 1999:168–169). That same year, the New York State legislature managed to lift "the requirement in place since 1712 requiring masters to post a £200 bond before freeing a slave" (Hodges 1999:169). In 1788, the New York legislature made "it illegal to buy or sell a slave with the intent to export him" and required owners to teach enslaved laborers born after the act to read (Hodges 1999:169). All illegally imported enslaved laborers were declared free, and the "right to trial by jury [was granted to enslaved laborers] accused of a capital offense" (Dodson et al. 2000:50).

The federal government, however, did little at this time to improve the rights of enslaved laborers. For instance, in 1793, the federal government passed the Fugitive Slave Act. The act "empowered slave catchers to enter northern states to retrieve escaped bondpeople and required citizens to help them" (Hodges 1999:166). The act also required "that persons removing a fugitive slave from a state first get a certificate of removal from a local, state, or federal judge" (Dodson et al. 2000:51). The problem posed by bounty hunters seizing and removing Africans and African Americans from New York was significant. Organizations such as the New York Manumission Society devoted many of their efforts to the legal protection of blacks alleged to be fugitive enslaved laborers hiding in the city (Dodson et al. 2000; see also Medford and Brown 2009a).

Despite the changing political and legal tides of the late-eighteenth century, some aspects of slavery remained unaltered. It took several decades for enslaved laborers in New York to be emancipated and even longer before the last vestiges of slavery in the state disappeared (Davis 2009; Rael 2005). As White (2005:151) has noted, measures to end slavery in New York were enacted at an almost "glacial" pace. An emancipation law was finally passed in New York State in 1799. The act specified a gradual end to slavery, granting freedom to the children of enslaved laborers after long periods of indentured servitude. Under the act, the male children of enslaved mothers were indentured to their mother's enslavers for 28 years. Female children of enslaved mothers were indentured to their mother's enslavers for 25 years (Harris 2003:11). New York legislators were fearful that rapid and immediate abolition would cause widespread civil unrest and economic depression. Under the new law, the owners of enslaved laborers were permitted to abandon newborns after 1 year, at which time the abandoned children would be cared for by the state. Hodges (1999:170) has argued that the "abandonment clause was a hidden form of compensated abolition," as New York State agreed to pay, even to former owners, $3.50 per month for the care of abandoned children.

During the early-nineteenth century, widespread international efforts at suppressing the trade in enslaved Africans led to official bans against slaving but did little to prohibit the use of enslaved Africans in American labor markets. In the United States, the importation of enslaved laborers was banned by federal law in 1808. That same year, the New York State legislature passed *An Act to Prevent the Kidnapping of Free People of Colour* (Dodson et al. 2000:54–55). Despite legal protection, illegal kidnapping of Africans and African Americans "by slave-hunting posses known as 'blackbirders'" continued, and many captured individuals "were sent to Cuba and South America" (Dodson et al. 2000:55).

When the last enslaved laborers residing in New York were finally freed on July 4, 1827, no large-scale celebrations were held, owing to fears of violent conflict (Dodson et al. 2000:60). However, African Americans celebrated Emancipation Day with quiet, private celebrations on July 4 and a peaceful march of more than 2,000 African Americans from John's Park to Zion Church on July 5 (Dodson et al. 2000:60; Hodges 1999). Although enslaved laborers held by state residents were officially emancipated on July 4, 1827, nonresidents were legally allowed to enter the state with enslaved laborers until 1841 (Dodson et al. 2000:70) and continued to do so illegally for years afterward (Davis 2009). Thus, it was long after formal emancipation in 1827 that the last vestiges of slavery in New York began to disappear.

Even as the heroes of the Revolutionary War decried British tyranny and likened British rule to the enslavement of American people, they lived in the midst of Africans and African Americans who toiled and suffered in slavery. The abuses of slavery in New York persisted more than a half-century after the Revolutionary War. Like their southern contemporaries, New York inhabitants of European descent were guilty of heinous crimes against humanity, pressing Africans, African Americans, and Native Americans into hard enslaved labor; severely restricting the rights and freedoms of enslaved and free Africans; exacting brutal and humiliating corporal punishments; and creating a racialized political economy with effects that continue to be felt today. Among those with a modicum of money and power, few could be excused from delivering the abuses of slavery, and everybody who was free shared some degree of involvement with the institution. Beginning as early as 1650 until around 1795, when the African Burial Ground closed, nearly all of those who suffered enslavement and died in New York City would have been buried in the African Burial Ground.

New York and the Transatlantic Trade in Enslaved Africans

Research into the African Burial Ground shows that many enslaved Africans, including those interred at the African Burial Ground, were forcibly migrated to New York through the provisions trade as well as acquired directly from Africa. For most of the individuals interred at the African Burial Ground, enslavement brought them or their ancestors to New York, where they lived out all or the remainder of their lives and were eventually buried. The researchers stress that in order to understand the African Burial Ground, it is necessary to understand its place within broad Atlantic-wide historical processes. Slavery in New York was embedded in extensive international, transatlantic processes that transformed the people and places of the Atlantic World into the complex demographic, cultural, and geographic mosaics of the modern world.

The Atlantic trade in enslaved Africans began substantially earlier than the settlement of Dutch New Amsterdam or the founding of the African Burial Ground (Medford, ed. 2009) (see Chapter 4). In 1444, the crew of a Portuguese ship attacked and kidnapped Africans in the Senegambia region and forcibly migrated the captives to Portugal, where they were later sold (Hall 2005). Enslaved Africans were first forcibly migrated across the Atlantic to Haiti and the Dominican Republic in 1502, just 10 years after Europeans first landed in the Caribbean (Dodson et al. 2000). The first enslaved Africans forcibly migrated to continental North America were brought in 1526 by Spanish colonists who settled in the area of South Carolina (Dodson et al. 2000). By the 1550s, the Portuguese were importing large numbers of enslaved Africans to Brazil, beginning processes of mass forcible migration that did not end for several centuries (Medford, ed. 2009) (see Chapter 4).

The Dutch became involved in the trade of enslaved Africans with the formation of the Dutch East India Company (Vereenigde Oostindische Compagnie, or VOC, in Dutch) in 1602 (Dodson et al. 2000). The first multinational corporation in the world, the VOC was established to trade in Africa and Asia. Granted a 21-year monopoly, the VOC focused its trading efforts mainly on the Indian Ocean, East Africa, and Southeast Asia, where it participated in a vigorous and long-standing trade in enslaved Asians (Vink 2003). The Dutch West India Company, which was "awarded . . . a monopoly for trade in the Americas and along the west coast of Africa," was founded in 1621 (Cantwell and Wall 2001:153). The West India Company's Atlantic trading monopoly was maintained until 1640, when the monopoly was lifted by the Dutch (Harris 2003). In 1624, shortly after its founding, the West India Company established New Amsterdam as a trading post for the fur industry, and, in 1625 and 1626, imported the first 11 enslaved Africans to New Amsterdam (Dodson et al. 2000; Harris 2003; Medford, Brown, Heywood, et al. 2009a:6; Moore 2005). Captured from Portuguese vessels and held captive by the West India Company, the names of the first enslaved Africans in New Amsterdam reflect their association with West-Central Africa and Portuguese slaving: "Paulo Angola, Big Manuel, Little Manuel, Manuel de Gerrit de Reus, Simon Congo, Anthony Portuguese Garcia, Peter Santomee, Jan Francisco, Little Anthony, and Jan Fort Orange" (Wilson 1994:37).

During the first two decades of settlement, settlers produced little other than furs. In the early years of settlement, settlers exported "as many as 15,000 furs . . . annually," but the grain exports that later came to characterize the colony's economy were almost nonexistent (Matson 1998:15). In order to settle New Amsterdam, the West India Company

introduced patroonships in 1629, large feudal estates granted to company members who pledged to settle 50 people within 4 years. In *New Project of Freedom and Exemptions*, the West India Company pledged to supply each patroon with 12 Africans captured as prizes, but by 1636, the West India Company "decided to initiate the direct purchase of enslaved laborers." The first West India Company voyages to the Kingdom of Kongo in West Central Africa began in 1638 (Medford, Brown, Heywood, et al. 2009a:7). The following year, in 1639, the West India Company sent vessels to West Africa, where "various Dutch ships loaded 688 enslaved people purchased in Allada [in the Bight of Benin region] to send to Brazil" (Medford, Brown, Heywood, et al. 2009a:7).

During the 1640s, New Amsterdam began to develop a vigorous trade between the Chesapeake and the West Indies, exporting manufactured goods, beer, liquor, and cloth in exchange for dye woods, sugar, tobacco, indigo, ginger, cotton, and enslaved Africans. City wholesalers sent vessels

> carrying European wares and cloth along with some foodstuffs, to eager colonists along the Delaware River or at the sugar plantations further south. They then took in peltry at the South River; tobacco, cattle, and slaves at Virginia and Barbados; and cotton wool, horses, and dye-woods at Caribbean ports. On the return trip, they stopped at New Amsterdam to drop off cattle, horses, and slaves for the colony and transferred peltry, specie, conch shells, and tropical luxuries to larger vessels . . . for the voyage to Amsterdam [Matson 1998:17].

Merchants like Augustine Heermans, a bohemian merchant from Prague, who in New Amsterdam built a private warehouse next to the West India Company's Pach Huys, teamed up to import "goods on return voyages from Amsterdam [occasionally making] detours via southern Europe for wine and slaves" (Matson 1998:26; see also Cantwell and Wall 2001).

By the 1660s, New Amsterdam had become "the most important slave port in North America" (Harris 2003:15) (Figure 18). To Governor Peter Stuyvesant, enslaved Africans had proven instrumental in building infrastructure and fighting Native Americans. Stuyvesant recommended in 1660 that the West India Company continue to import enslaved laborers, particularly those who were "clever and strong" (quoted in Medford, Brown, Heywood, et al. 2009b:15). The West India Company endeavored to meet the New Netherland's demand for enslaved Africans. In 1644, the Board of Accounts on New Netherland indicated their intention to sell as many enslaved laborers as could be afforded by the inhabitants of Pernambuco in Dutch-occupied Brazil. That same year, when the *Tamandare*'s cargo of enslaved Africans was insufficient to meet New Amsterdam's demand, the company directors recommended they "take care, that a greater number of negroes be taken there" (quoted in Medford, Brown, Heywood, et al. 2009a:7).

Ten years later, in 1654, the *Witte Paert* (White Horse) arrived in New Amsterdam with a cargo of 300 enslaved African men and women (Harris 2003:15; Matson 1998:76; Wilson 1994). In 1659, the *St. John* arrived in New Amsterdam with a "cargo of 300 enslaved Africans" and, later in the year, another vessel carrying "331 enslaved men, women, and children" arrived in New Amsterdam (Wilson 1994:39). Wilson (1994:39) has determined that the captives from the latter shipment were "sold for food products, specifically peas and pork." In 1664, the West India Company ship *Gideon* arrived in New York with a cargo of 291 enslaved Africans from Guinea, Angola, and Cayenne who had been transshipped to New Amsterdam by way of Curaçao (Heywood and Thornton 2009a:29; Piersen 1996).

The year 1664 was crucial to the history of slavery in New York; it marked a sea change in the oppression of enslaved laborers. In September of 1664, the Dutch colony of New Amsterdam was captured by the British. After this point, most enslaved Africans that were forcibly migrated to New York were from West Africa rather than West-Central Africa, the British became heavily involved in the trade in enslaved Africans, and the oppression of enslaved Africans and their descendants worsened (Medford, Brown, and Carrington 2009:26–27). After the British invasion, New Amsterdam was renamed "New York" in honor of James, Duke of York. In 1664, James, Duke of York, was granted all of New England, including New York, by his brother, King Charles II. In dictating the terms of surrender, the English recognized "the legality of all Dutch-claimed property, including slaves" (Dodson et al. 2000:27).

The researchers observe that as a major shareholder in the Royal African Company, James, Duke of York, was a major participant in the trade in enslaved Africans (Dodson et al. 2000; Medford, Brown, and Carrington 2009:26). Founded in 1660, the Royal African Company attempted "to sell in Manhattan large cargoes of slaves directly from Africa at fixed

Figure 18. The Market House, site of hiring and sale of enslaved Africans (from Bruce 1898) (from Volume 3 [Medford, Brown, Carrington, et al. 2009e:Figure 17]).

prices" (Harris 2003:28). Between 1664 and 1737, the Royal African Company sold 2,031 enslaved Africans in Manhattan, amounting to an average of 27.8 enslaved Africans per year (Harris 2003:28). Promptly after the takeover, the notoriously restrictive Duke's laws, which essentially promoted slavery and the trade in enslaved Africans, were established by Governor Nicolls.

Under British law, the new codes restricted the use of European indentured servants and promoted slavery by granting "port privileges and warehouse priority to ships engaged in the slave trade" (Dodson et al. 2000:27). Although the Royal African Company was not as successful as anticipated by British factors, the British effectively took over trade patterns established earlier by the Dutch. In 1673, the Dutch conceded "the lion's share of the West African slave trade and the Caribbean staples trade to England" (Matson 1998:44). As economic relationships between British colonies were restructured by the British, New York began to take on a major role in distributing grain to the colonies and, as a consequence, increased its role in the trade in enslaved Africans. In 1680, the Bolting Act was passed by the provincial council, granting "New York City the exclusive right to bolt (sift) flour and pack flour and biscuit for export" (Rothschild 1990:11; see also Matson 1998:103). The act further increased New York's role in the trade in enslaved Africans by "substantially increasing the need for slave labor in the Hudson Valley region" (Dodson et al. 2000:29).

Along with the Portuguese, the British were among the largest importers to the Americas of enslaved Africans between 1650 and 1800, while the African Burial Ground was in use (see below; see also Chapter 4). With the Treaty of Utrecht at the close of Queen Anne's War (1702–1713), "England had acquired Nova Scotia, Newfoundland, Gibraltar, Minorca, and Hudson's Bay, as well as the coveted *asiento*—the right to supply slaves to plantations in the Caribbean and South American colonies—that England won from Spain, and that Parliament bequeathed to the newly chartered South Sea Company" (Matson 1998:123). After Queen Anne's War, "New York City's slave trade from the Caribbean rose noticeably" (Matson 1998:202). By 1720, the New York colony contained more enslaved laborers—5,470—than any other northern colony. New York's enslaved population more than doubled New Jersey's, which held 2,384 enslaved laborers. At the time, the largest numbers of enslaved laborers were held in the southern colonies where, with the exception of urban centers like Charleston, South Carolina, they were spread across the countryside in rural plantations. For instance, in 1720 there were 2.3 times more enslaved laborers (n = 12,499) in Maryland and 4.9 times more enslaved laborers in Virginia (n = 26,550) than the number in New York.

In the 1730s, economic recession caused many residents to leave New York, and to make up the labor deficit, importation of enslaved labor increased (Foy 2006:57). In 1734, New York's merchant fleet

numbered 50, a substantial decline since 1700, when New York boasted 124 merchant vessels (Foy 2006:57). Despite a noticeable decline in merchant shipping and economic recession, the largest number of enslaved Africans imported by New York merchants were imported between 1725 and 1735, averaging 150 slaves a year (Matson 1998:203). During the 1730s, "a large number of New York and New Jersey partners owned shares together in the *Catherine*, *Sally*, and *Little David*, all of which sailed to Africa for slaves or Madeira for wine" (Matson 1998:199–200). Between 1737 and 1771, the "Royal African company imported 4,394 slaves into Manhattan," a substantial increase on average over the importation rates of the preceding 73 years (Harris 2003:29). During this period, the Royal African Company imported an average of 129.2 enslaved Africans per year, or 4.6 times as many as during the preceding period (1664–1737).

As with the Dutch, importation of enslaved laborers to New York under British rule was often a result of the provisions trade with the West Indies (see discussion in Medford, Brown, Carrington, et al. [2009a:43–47]). For instance, in the 1680s, Adolphe Philipse's ships frequently brought "Virginia tobacco, Honduras dye-woods, and West Indian muscovado (raw sugar) and cotton to both London and Amsterdam, as well as a few slaves per voyage to New York City" (Matson 1998:76). Similarly, New Yorker Benjamin Faneuil—the son of a "prominent Boston merchant family"—regularly sent vessels to West Indian ports and brought in vessels "direct from Antigua, Martinique, Barbados, or St. Thomas with rum, sugar, slaves, and European goods" (Matson 1998:134). Although the bulk of the local trade occurred in this way, large shipments of enslaved Africans direct from Africa were also brought over. In 1698, for instance, three vessels carrying enslaved Africans arrived in New York. One carried enslaved Africans from Guinea, and the other two returned from Madagascar (Goodfriend 1992:112). Perhaps referring to similar shipments, Lord Cornbury related 10 years later that New Yorkers were occasionally sending vessels to the Coast of Guinea for enslaved Africans who were then sold in Maryland and Virginia, where there was more demand (Goodfriend 1992:113). Between 1715 and 1717, approximately 400 enslaved East Africans were brought to New York "when the East India Company opened its East African slave trade to private traders" (Harris 2003:29). In 1720, the *Postillion* and *Crown Gallery* made at least six voyages that "returned directly from the west coast of Africa . . . with cargoes of more than one hundred slaves each trip"(Matson 1998:203). One-hundred-seventeen captive Malagasy from Madagascar arrived in New York in 1721 (Goodfriend 1992:113). Tragically, half of the captives on the 1721 voyage died during the Middle Passage (Eltis et al. 1999).

The British were also eager to enslave "Spanish Indians" and Native Americans whenever possible (Harris 2003). In 1704, a Dutch privateer arrived in New York with 30 prisoners captured from a Spanish prize. Owing to their dark complexion, Spanish Indians on board the captured vessel were sold into slavery in New York (Goodfriend 1992:114). In the 1730s and 1740s, captured "dark-skinned Spanish sailors" were increasingly condemned to slavery. To justify their reassignment, people that previously would have been described as "Spanish Indians" now came to be classed as "Negroes" (Foy 2006:64). The situation worsened to the extent that, in 1740, the Spanish government threatened to treat British subjects as enslaved laborers unless the British ended the practice of selling dark-skinned Spanish prisoners of war into slavery (Harris 2003:30). In New York, the British permitted the enslavement of Native Americans from outside the colony but, to avoid insurrection, prohibited the enslavement of "native inhabitants" of the colony (Harris 2003:28).

New York Settlement

The first European to explore waterways in the vicinity of Manhattan was Giovanni da Verrazzano, a Florentine, who in 1524 visited the Hudson River in search of the Northwest Passage (Frohne 2002:144). Eighty-five years later, in 1609, Henry Hudson sailed his ship, "the Half Moon, past the island Native Americans call Manhatta" (Dodson et al. 2000:19). The first Europeans to land at Manhattan were Dutch fur traders on a voyage funded by the Van Tweenhuysen Company (Rothschild 1990). Led by Adrian Block, the Dutch arrived on three ships, "the *Tijger*, captained by Adrian Block . . .; the *Fortuyn*, captained by Hendrick Christiaensen; and the *Nachtegael*, captained by Thijs Mossel" (Cantwell and Wall 2001:150). After a dispute, part of Block's crew commandeered the *Nachtegael* and abandoned Block, his captains, and the rest of his crew to winter on Manhattan Island. Block built temporary structures on Manhattan Island while rebuilding his boat, the *Fortuyn* (Rothschild 1990:9).

A member of Block's party, the mulatto Jan Rodrigues, remained on the island and became Manhattan's first inhabitant of African descent. Later, Rodrigues "became fluent in Native American languages, and . . . facilitated trade relations between [European explorers and traders] and Native Americans" (Harris 2003:13; see also Dodson et al. 2000:19).

Within a decade of their first landing, the "Dutch elected to expand their presence into North America by establishing a trading post in the Hudson River Valley [in order to take advantage of] the very profitable fur trade, which they conducted with local native groups" (Medford, Brown, Heywood, et al. 2009a:5). When New Amsterdam was first settled by the Dutch, the local Native American Lenape had "two seasonal camps in the vicinity—one at the southern tip of Manhattan, which was called Kapsee, and the other a short distance away, known as Werpoes" (Medford, Brown, Heywood, et al. 2009a:5). The Dutch traded "knives, axes, hoes, blankets, brass kettles, combs, guns, and alcohol" for pelts (Medford, Brown, Heywood, et al. 2009a:5). Six *bouweries*, or farms, were established the following year "along the eastern and western shores of Manhattan Island, just north of the settlement" (Harris 2003:14), and the first 11 enslaved Africans in New Amsterdam, owned by the West India Company, began to clear land for farms and construct roads, structures, and fortifications (Dodson et al. 2000:19; Medford, ed. 2009).

In 1626, Manhattan Island was "purchased" by New Netherland Director-General Peter Minuit from local Native Americans who likely saw the purchase as a friendly exchange that acknowledged temporary use-rights rather than the permanent transfer of landownership (Dodson et al. 2000:20). Following the purchase, Director Willem Verhulst aggregated people scattered throughout New Netherland at New Amsterdam (Frohne 2002:147). Using enslaved labor, Fort Amsterdam, a sawmill, "just over two dozen cabins, and a gristmill" were built (Medford, Brown, Heywood, et al. 2009b:16; see also Rothschild 1990:10). Over the next two centuries, New York saw tremendous development, with the construction of taverns, markets, docks, churches, warehouses, industrial parks, and other facilities. With the survey and development of roads and new lots for commercial and residential development, the city expanded ever northward, often swallowing up areas that once formed its hinterland until, eventually, New York grew into the massive, bustling megacity it is today (Rothshild 1990).

Landownership, Development, and the African Burial Ground

The excavated portion of the New York African Burial Ground, at 290 Broadway in Block 154 of Lower Manhattan, was a small portion of the northeastern quadrant of a much larger burial ground—the African Burial Ground. The New York African Burial Ground researchers note that if the African Burial Ground was approximately 6 acres in size, the 0.62-acre area investigated archaeologically represents only 10 percent of the burial ground, and the 0.22-acre area in which burials were excavated represents only 3.7 percent of the burial ground (Howson and Bianchi 2009a:73). Given the number of individuals estimated from remains recovered during excavation and assuming uniform density of burials throughout the African Burial Ground, this figure would suggest that approximately 11,000–15,000 individuals could have been buried there. During its period of use, the African Burial Ground was contained mostly within two privately held land parcels located near the northern edge of the Common—Calk Hook Farm Lot No. 2 and the Van Borsum patent. Portions of the African Burial Ground could have also extended south into parts of the Common, such as in areas that would later become City Hall Park.

Calk Hook Farm

The Dutchman Jan Jansen Damen received a patent in 1646 for the Calk Hook Farm, which he held for 10 years. Damen's Calk Hook Farm extended northward from the northwest corner of present-day Block 154 and skirted the west side of the Collect Pond. After Damen's death ca. 1651, the Calk Hook Farm was divided into four lots, Calk Hook Lot Nos. 1–4. In 1671, the southeastern lot, Calk Hook Lot No. 2, was deeded to Jan Vigne, the son-in-law of Damen's wife. This lot, which overlapped a portion of the New York African Burial Ground, was placed under the control of Vigne's nephew, Gerrit Roos, upon Vigne's death in 1689. Ownership or control of the land then changed hands several times until 1725, when the Rutgers purchased the property. Peter Roos oversaw the property beginning in 1697, as executor of his father's estate. The property was sold in 1708 to Wolfort Webber. Calk Hook Lot No. 2, along with Lot Nos. 1 and 3, was later acquired in 1725 by Anthony Rutgers. Rutgers's heirs held on to the property for the remainder of the eighteenth century, dividing it

into residential lots toward the end of the century (Howson, Bianco, et al. 2009:40).

The Van Borsum Patent

The majority of the African Burial Ground was within the 6.6-acre Van Borsum patent. Dutchman Cornelis Van Borsum acquired a patent in 1673 from Governor Colve for an area immediately to the southeast of Vigne's Calk Hook Lot No. 2. Governor Colve, who had received the land during the Restitution, granted it to Van Borsum in honor of Sara Roeloff's (Van Borsum's wife) service as a translator between the government and local Native Americans (Frohne 2002:168; Howson, Bianco, et al. 2009:47; Medford and Brown 2009b:3). The grant was described as a

> certain small parcel of land situate on the Island of Manhattan about north-west from the Windmill, beginning from the north end of the road which runs toward the Kalckhook, broad in front on the road or west side, 24 rods; in the rear on the east side, the like 24 rods; long on each side as well along the Kalckhook as on the south side, 44 rods each [Stokes 1915–1928:6:123, quoted in Howson, Bianco, et al. 2009:42].

Today, the edges of this parcel are roughly described by a polygon enclosed by the intersections of Broadway, Duane Street, Centre Street, and Chambers Street. A small portion of the parcel was located in the southern portion of modern-day Thomas Paine Park. Van Borsum willed his entire estate to Sara Roeloff upon his death in 1680 (Frohne 2002:169). Sara Roeloff married her third husband, Elbert Stouthoff, 2 years later but retained ownership of the property through a prenuptial agreement (Howson, Bianco, et al. 2009:42). Upon her death in 1693, Sara Roeloff willed "her estate to her children and named as executors her son Lucas Kiersted and sons-in-law Johannis Kip and William Teller" (Howson, Bianco, et al. 2009:42). She had seven living children by her first husband Hans Kiersted[1] and one by her second husband Cornelis Van Borsum. As "neither the [1673] ground brief nor the 1696 deed of confirmation mentions the cemetery," the first noticeable use of the African Burial Ground for burial may have begun closer to 1700 rather than 1650 (Howson, Bianco, et al. 2009:42).

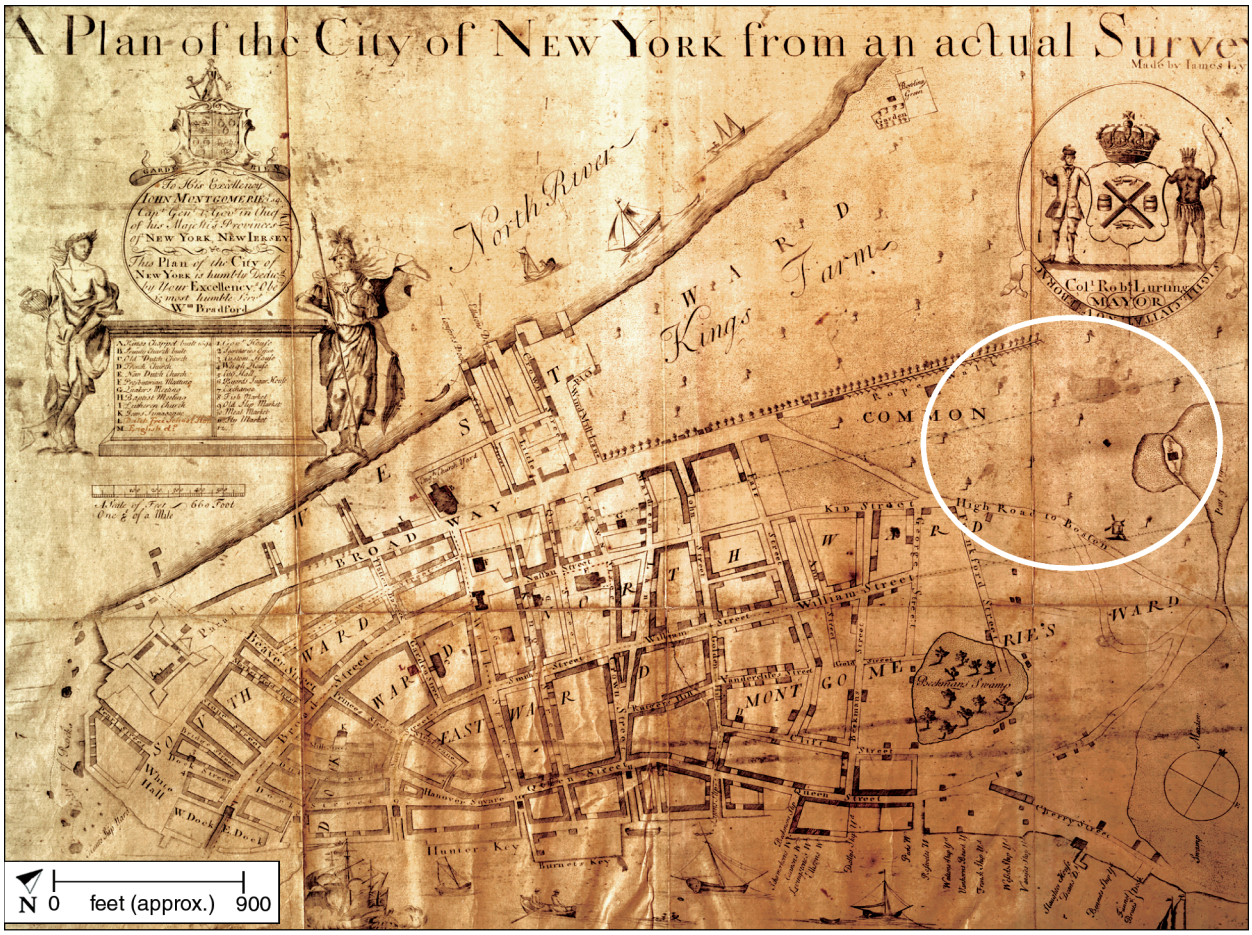
Land Development in the Vicinity of the African Burial Ground

Around 1730, a stoneware pottery leased a piece of land near the southeast corner of the Van Borsum property; another pottery (the Crolius Pottery) was located north of the burial ground on a parcel of land owned by Abraham Van Vleck, the husband of Sara Roeloff's granddaughter Maria. One or both of these potteries is probably responsible for disposing pottery waste materials at the African Burial Ground (Figures 19 and 20). The Maerschalk Plan (1754) depicts these potteries mid-century, as well as a palisade wall that crossed the southern portion of the Van Borsum property, a structure on Broadway, and a possible fence line that may have formed the southern boundary of the Calk Hook Farm (Figures 21 and 22). During the 1760s, three houses were built on the Van Borsum parcel along the east side of Broadway by Isaac Teller, a descendant of William Teller. These houses and their lots probably overlapped and disturbed portions of the African Burial Ground. In May 1768, Teller allegedly fenced a portion of the burial ground and demanded payment for entry (Baugher and Lenik 1997:4; Howson, Bianco, et al. 2009:48). Because of residential development, Howson, Bianco, et al. (2009:48) speculate that "by the 1760s, it is likely that no burials occurred within 100 feet of Broadway, the depth of a typical lot." Further, they suggest that by the publication of the 1767 Ratzer Map, which depicted structures and possible fence lines on all four sides of the African Burial Ground, "the physical area available for interments was becoming increasingly constrained by this time" (Howson, Bianco, et al. 2009:52) (Figure 23).

New York African Landownership, the Common, and the African Burial Ground

Issues that are central to understanding the formation of the African Burial Ground are New York African landownership and the development and use of the Common. Like some domestic spaces within the urban households of enslavers, the African Burial Ground and New York African-owned farms were spaces that Africans controlled to some degree. New York African-controlled spaces, such as the

[1] In 1638, the 26-year-old Hans Kiersted came to New Amsterdam as the West India Company's surgeon. Nine years later, Hans Kiersted was granted a parcel of land "at the corner of today's Whitehall and Pearl Streets." In 1661, the city built one of two markets for trade with Native Americans in front of the Kiersted house (Cantwell and Wall 2001:173).



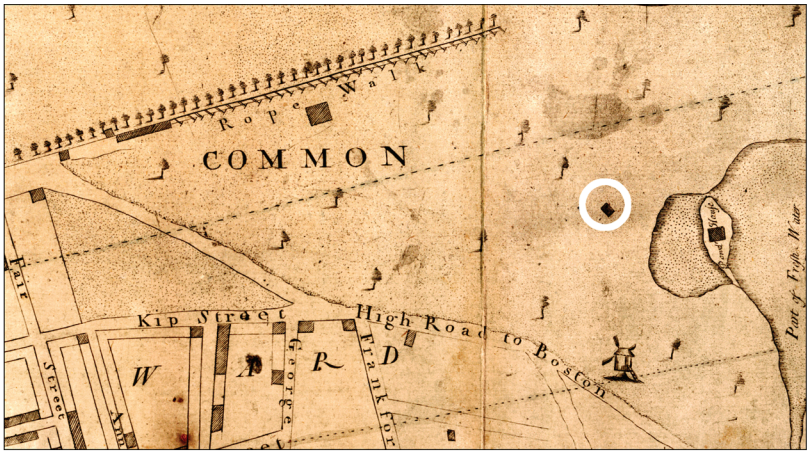


Figure 19. The Lyne-Bradford Plan, printed by William Bradford in 1731 from a survey made by James Lyne, depicts New York in 1730. The general location of the African Burial Ground is circled above. The structure encircled on the detail at the right was the Crolius Pottery. The large structure on the Common adjacent to the ropewalk has not been identified. The dashed line parallel to the ropewalk is a ward boundary (Rare Books Division, The New York Public Library, Astor, Lenox and Tilden Foundations) (from Volume 2, Part 1, [Howson, Bianchi, et al. 2009:Figure 15]).

African Burial Ground, were central to the formation of neo-African identities (see Chapter 4). Many enslaved Africans lived in the urban households of city merchants and artisans, but free Africans formed communities early on, including some in the vicinity of the African Burial Ground. Because of urban expansion and pressure from Euroamericans, these communities shifted across the landscape through time. The Common also changed through time, as industries and public facilities were developed, and portions of the Common were carved out to form private parcels of land.

Figure 20. The 1740 Carwitham Plan. Named for its engraver John Carwitham, the plan provides more detail than the Lyne-Bradford Plan (1731) on which it was based. The arrow on the upper left points to the Crolius Pottery, located just south of the ponds, in what was probably the southeastern part of the African Burial Ground (Viscount Coke and the Trustees of the Holkham Estate) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 16]).

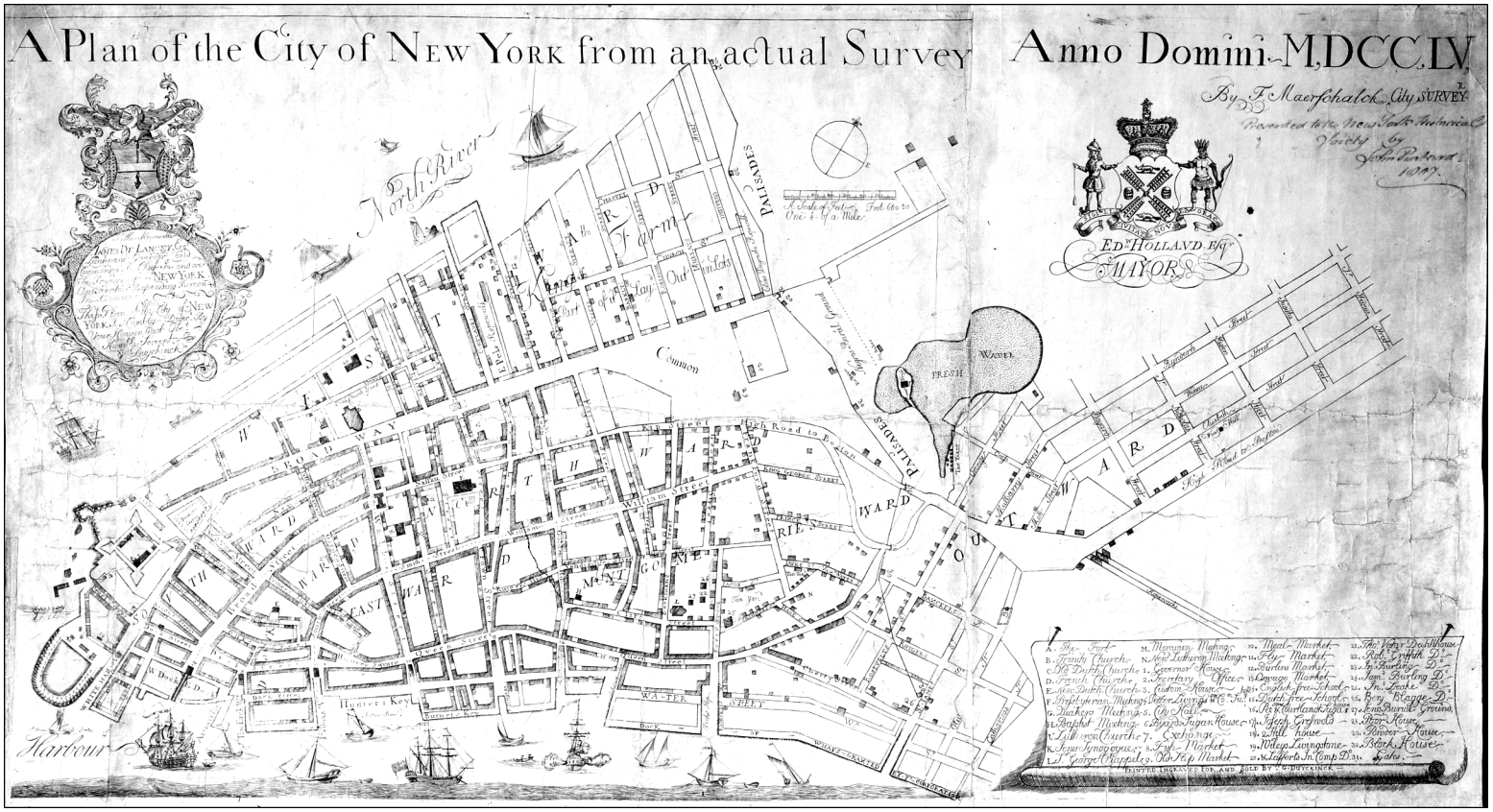


Figure 21. The Maerschalk Plan, surveyed by Francis Maerschalk in 1754 and published by Gerardus Duyckink in 1755. The African Burial Ground is depicted west of the Collect Pond, or "Fresh Water" (Collection of the New-York Historical Society, Accession No. NS4 M31.1.32) (from Volume 3 [Medford and Brown 2009b:Figure 2]).

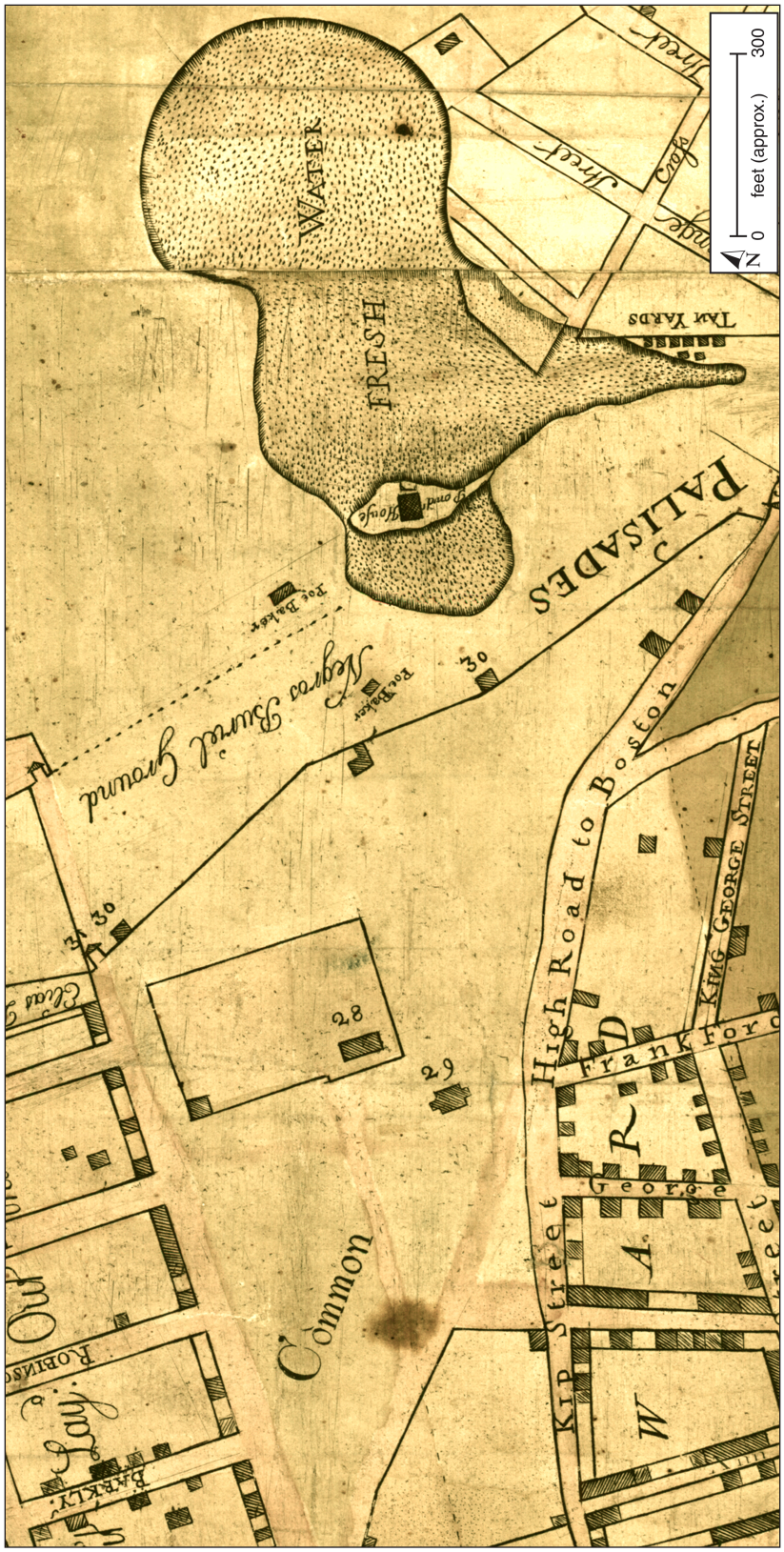


Figure 22. Detail from the Maerschalk Plan (1754–1755), showing the African Burial Ground and nearby features (Geography & Map Division, Library of Congress) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 19]).

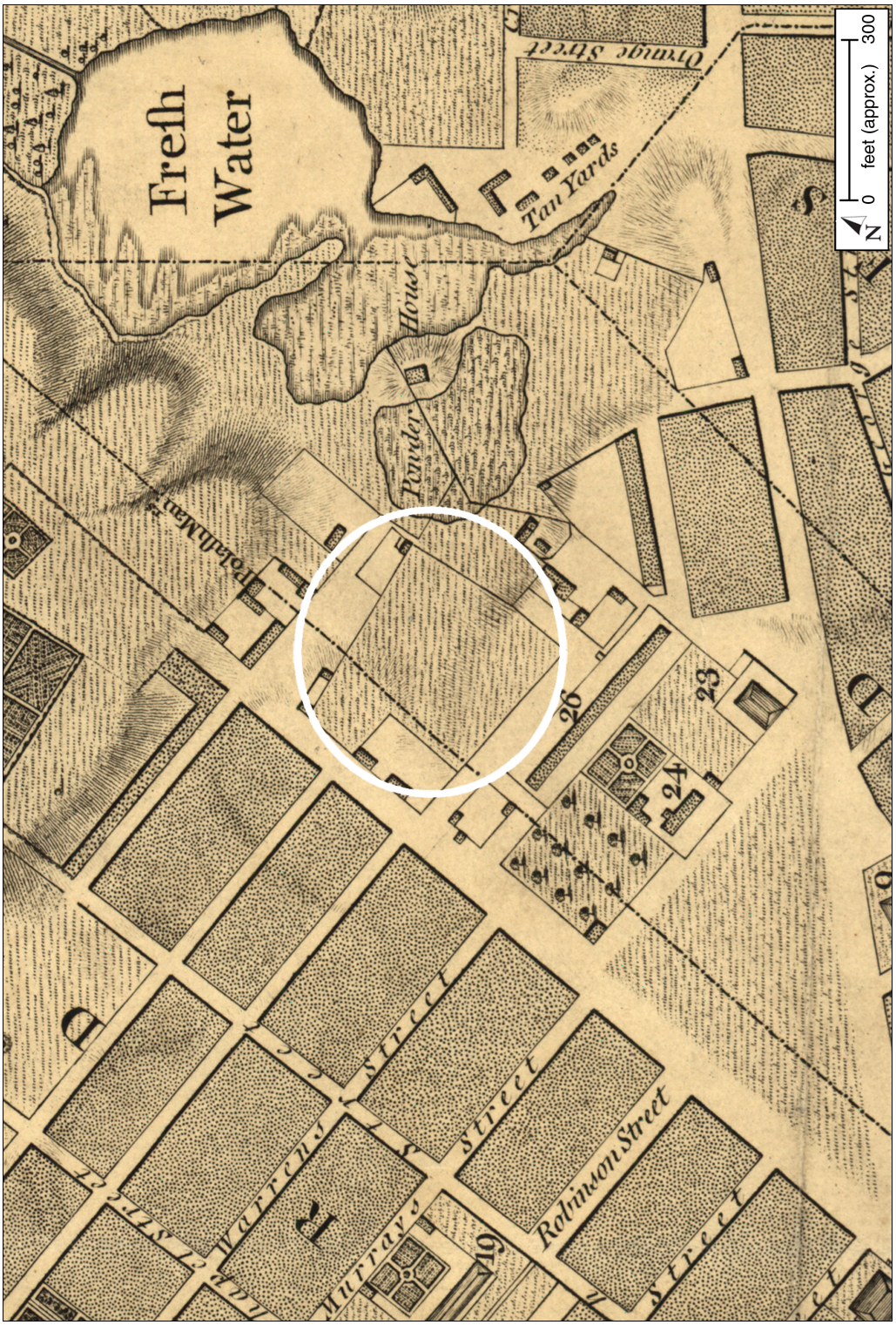


Figure 23. Detail from the Ratzer Map, 1767, surveyed by Bernard Ratzer. The general location of the African Burial Ground is circled. The hachures indicating relief suggest the contours of the hillside sloping down from south to north through the area. Note structures on Broadway properties on the west side of the burial ground, the pottery buildings on the southeast, the barracks (No. 26) to the south, the almshouse and gaol (No. 24 and No. 23) below the barracks, and the diagonal line that may have marked the northern boundary of the Van Borsum patent (Geography & Map Division, Library of Congress) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 20]).

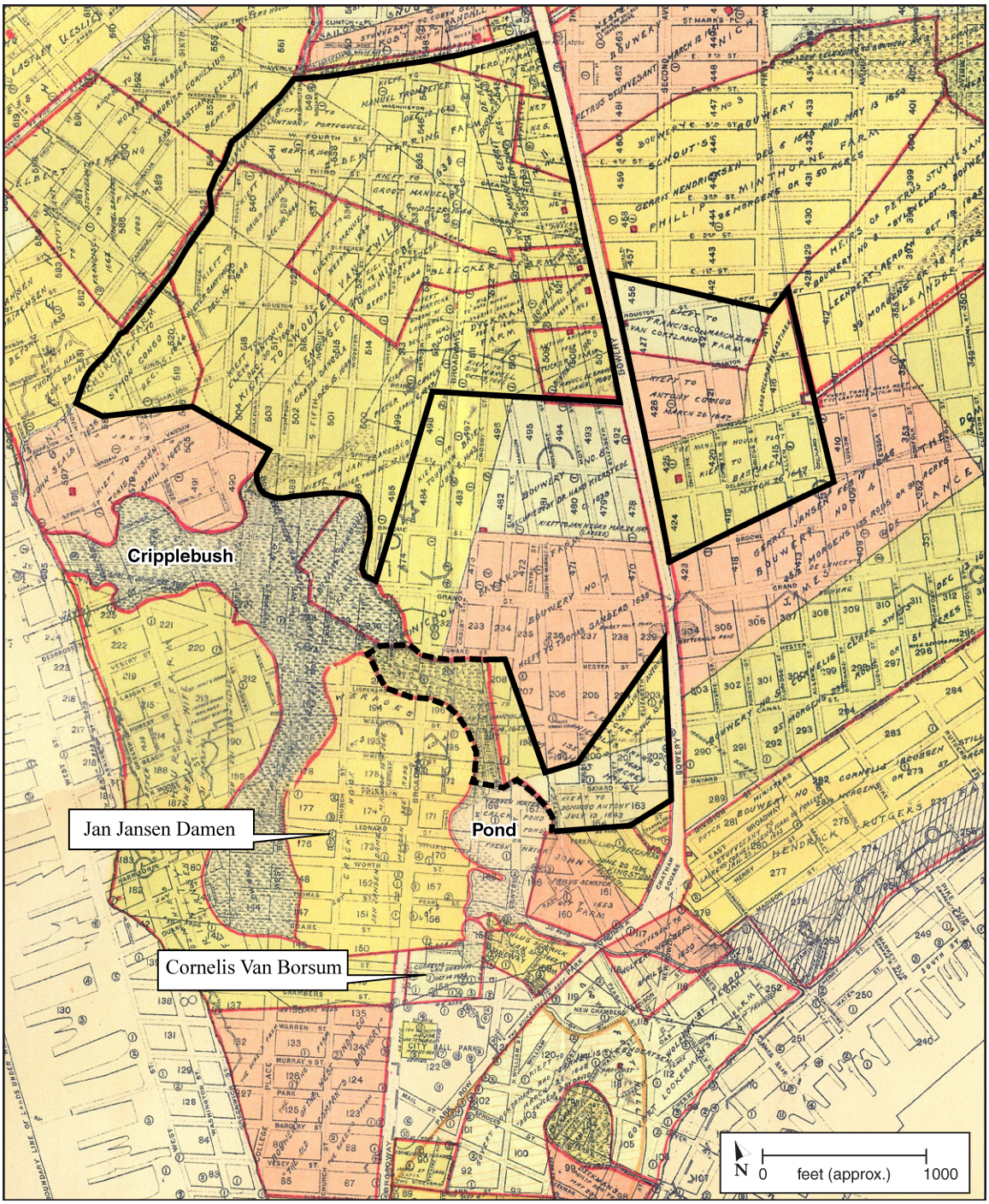


Figure 24. Detail from a map of Dutch-era land grants, superimposed on a Manhattan street grid (ca. 1835), showing the approximate locations of patents issued to African men and women, Jan Jansen Damen, and Cornelis Van Borsum. Map prepared by R. H. Dodd from translations of the original ground briefs (from Stokes 1915–1928:2:Plates 84Ba and 84Bb; on the creation of the map, see Stokes [1915–1928:2:355–357]) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 13]).

New York African Landownership

Free Africans were landowners early on in the Dutch settlement of New Amsterdam (Medford, Brown, Heywood, et al. 2009b:21–22) (Figure 24). At this time, Europeans did not see as many differences between themselves and Africans as those that later came to define the strained relations between people of African and European descent (Eltis 2002). In seventeenth-century New Amsterdam, free Africans

legally purchased, sold, and willed land as well as received land grants. In 1639, for instance, Anthony Jansen van Salee, a free Moroccan, sold "his Manhattan farm to Dutch baker Barent Dircksen," and Governor Willem Kieft granted van Salee a 200-acre farm on Long Island (Dodson et al. 2000:20; Moore 2005). The "first geographically designated black community in New York City" was established north of the city (in the area of Greenwich Village) in 1643 and 1644, when the Dutch granted half-freedom and farm acreage to the first enslaved Africans brought to New Amsterdam (Harris 2003:23; Moore 2005; Wilson 1994:39). Between 1643 and 1662, the Dutch granted parcels between 2 and 18 acres in size to 28 different black landowners (Table 2).[2] Many of these parcels formed a loose arc around the northern periphery of the Collect Pond and the Cripplebush, a swampy thicket west of the Collect Pond (Howson, Bianco, et al. 2009:38). Called "the land of the blacks" in legal documents, Moore (2005:45) refers to this community near the African Burial Ground as "the first legally emancipated community of people of African descent in North America."

Between 1659 and 1660, Peter Stuyvesant relocated, for security reasons, some African farmers, at least nine of whom were granted parcels of land, to locations along Broadway near Stuyvesant's farm (Howson, Bianco, et al. 2009:40). As an account by Dutch traveler Jasper Danckaerts indicates, by the 1660s, a large number of landowning African families were living north of the city (Frohne 2002:157; see also Goodfriend 1992:115). Much of today's Washington Square Park was deeded to Big Manuel (Manuel Groot); Paulo Angola's 6-acre grant extended between Minetta Lane (also known as Minetta Creek or the Negroe Causeway) and Thompson Street (Moore 2005). Domingo Antony's 12-acre parcel stretched from near present-day Canal Street in the vicinity of Broadway to the Collect Pond, which was near present-day Franklin and Lafayette Streets. Simon Congo's 8-acre parcel centered on the intersection of present-day Varick and King Streets (Howson, Bianco, et al. 2009:38). Twenty years after Stuyvesant's relocation effort, Danckaerts noted that this stretch of road was thickly settled by Africans, Europeans, and people of mixed descent:

> We went from the city, following the Broadway, over the valley, or the fresh water. Upon both sides of this way were many habitations of negroes, mulattoes and whites. These negroes were formerly the proper slaves of the (West India) company, but, in consequence of the frequent changes and conquests of the country, they have obtained their freedom and settled themselves down where they have thought proper, and thus on this road, where they have ground enough to live on with their families [quoted in Howson, Bianco, et al. 2009:40].

New York Africans held onto their land, as well as acquired more. In 1667, for instance, Solomon and Lucas Pieters[3] inherited a 6-acre farm from their father, Pieter San Tomé. In 1680, Solomon Pieters purchased a 30-acre plot of land near Twenty-third Street and Broadway (Dodson et al. 2000:29). Upon his death in 1694, Solomon Pieters left his house, land, and furnishings to his wife and his tools and weapons to his sons (Goodfriend 1992:116). In 1674, Francisco Bastien (or Franz Batiaensz), a free African, purchased 4 acres of land in Gramercy Park from Judith Stuyvesant (Dodson et al. 2000:28; Goodfriend 1992:116) and, 10 years later, purchased a 15-acre plot of land at Thirty-fourth Street and Sixth Avenue (Dodson et al. 2000:28). In 1685, Anthony John Evertse, a free African, "purchased 100 acres at the Great Kill from Anna Hall" (Goodfriend 1992:116), a property he sold 12 years later to Adrian van Schaick (Goodfriend 1992:253 n. 40).

Unfortunately, free African New Yorkers began to lose their grip on landownership during the British occupation, when new laws restricted black landownership and covetous whites pressured free blacks for control of black-owned land as the city expanded. By 1696, most African-owned land around the Collect Pond had been sold to people of European

[2] Although these measures may have been partially motivated by fears that enslaved Africans would join the Native Americans in fighting against the Dutch, Swan (1998a, 1998b) has suggested that the West India Company's measures were enacted to address the problem of virtually nonexistent food production. To Swan (1998a, 1998b), Stuyvesant provided half-freedom and cultivable land to the West India Company's enslaved Africans in order to "produce food without expense to the company . . . supply the garrison during an enemy attack [and] produce "pottage" (a thick meat and vegetable soup or stew transported in pots used to feed ships' crews) at prices lower than that obtained in New Netherland" (Swan 1998a, 1998b). Another reason for providing half-freedom and land north of the settlement was to "create a buffer zone that would insulate the city from attack" by hostile Native Americans (Moore 2005:43).

[3] Lucas, the son of a formerly enslaved African, achieved success as "the colony's first known black physician" (Dodson et al. 2000:29).

Table 2. Land Grants Awarded to Blacks, 1643–1662

Landowner	Acreage	Year Granted
Catalina Anthony	8	1643
Domingo Anthony	12	1643
Cleyn (Little) Manuel	10	1643
Manuel Gerrit de Reus	12	1643
Manuel Trumpeter	18	1643
Marycke	6	1643
Gracia D'Angola	10	1644
Simon Congo	8	1644
Jan Francisco	8	1644
Pieter San Tomé	6	1644
Manuel Groot (Big Manuel)	8	1644
Cleyn (Little) Anthony	6	1644
Paulo D'Angola	6	1644
Anthony Portuguese	12	1645
Anna D'Angola	6	1647
Francisco D'Angola	6	1647
Anthony Congo	6	1647
Bastiaen Negro	6	1647
Jan Negro	6	1647
Manuel the Spaniard	4	1647
Mathias Anthony	2	1655
Domingo Angola	4	1658
Claes Negro	2	1658
Assento Angola	2	1658
Francisco Cartagena	2	1658
Anthony of the Bowery	2	1658
Anthony the Blind Negro	2	1658
Manuel Sanders	4	1662

Note: This table is abstracted from data presented in Moore (2005:43).

descent. As a result of laws passed following the 1712 Uprising (see Chapter 7), African New Yorkers freed after 1712 were prohibited from owning real estate, and free Africans were required to forfeit real estate to the British crown (Harris 2003:39; Wilson 1994:64). By 1716, after a half-century of British rule, the last piece of land in Lower Manhattan owned by an African New Yorker, Francisco Bastien, was sold by his heirs (Dodson et al. 2000:31). The loss of New York African landholdings probably made the African Burial Ground all the more important, as one of only a few African-controlled spaces left in Manhattan.

The Common

For many European settlements, the Common was an area on the outskirts of town that could be freely accessed and used by townspeople for diverse purposes. Free, unrestricted use of finite, commonly held resources, such as water, timber, or grazing lands, often led to the overexploitation and destruction of resources, or a situation Hardin (1968) has referred to as "The Tragedy of the Commons." In colonial New York, the Common was located immediately north of the city near the Collect Pond (aka Fresh Water, or Kalkhook). The Common was used for many activities that required open space, fresh water, pastureland, or some degree of remove from the city—including grazing, hide tanning, beer brewing, livestock slaughtering, imprisonment, and human burial. In colonial New York, the Common was the locus of the unwanted, the smelly, and the unsightly—noxious industries, prisons, poorhouses, military installations, and the burials of Africans, urban poor, prisoners, prisoners of war, and deserters. Like Hardin's (1968) Common, New York's Common eventually succumbed to overexploitation, pollution, and urban development. By the beginning of the nineteenth century, after more than a century of overuse, pollution, and public health scares, parts of the Common and the Collect Pond were filled in, covered up, and put to new uses, such as residential development.

During Dutch settlement, the Common was more or less open space. Not much is known specifically about how the space was used. With the British takeover in 1664, the Common became property of the city (Frohne 2002:168). The Common was again appropriated by the city in 1730 as part of the Montgomerie Charter, which placed "all of the waste, unpatented, and unappropriated land" under the control of city government (Frohne 2002:168). The city used the Common to build a number of public institutions as well as to host public events, most with negative connotations, such as the execution of Africans persecuted for alleged participation in the purported grand conspiracy of 1741 (Howson, Bianco, et al. 2009:44) (see Chapter 7). A powder house was built on the Common in 1728 (Frohne 2002:168). The city built an almshouse for the poor on the Common in 1734, and in the 1740s, palisades, barracks, and a powder magazine were also constructed there (Frohne 2002:168; Rothschild 1990:13). During the 1730s and 1740s, public gatherings—including executions—were held on the Common (Frohne 2002:168). Public executions of Africans may have occurred on the African Burial Ground (see Chapter 7) (Figure 25). In 1775, Bridewell, a city prison for debtors and vagabonds, was built on the Common west of the city's Almshouse (Frohne 2002:174; Howson, Bianco, et al. 2009:52). On the eve of the Revolutionary War, the Provincial Congress ordered all free and enslaved Africans to build fortifications in the area of the Common. Using whatever tools they could muster, enslaved Africans worked every day, and free Africans, every other day (Harris 2003:55).

The Almshouse, prison, and barracks were all located southwest (or near the southwestern edge) of the African Burial Ground in what is now City Hall Park. Portions of these city facilities have been the subject of archaeological investigation. Conceivably, these city facilities could have encroached upon early portions of the African Burial Ground and thus disturbed burials in their construction. During the Revolutionary War, deserters and prisoners of war were buried behind the barracks on the Common in an area that may have overlapped with the southern portion of the African Burial Ground (Howson, Bianco, et al. 2009:52) (Figure 26). The New York African Burial Ground researchers have noted that Revolutionary War burials probably occurred between Reade Street and Chambers Street and were not part of the excavated portion of the New York African Burial Ground at Block 154. Some Revolutionary War graves may have been shallow, unceremoniously placed mass graves (Howson, Bianco, et al. 2009:52). No mass graves were discovered at the New York African Burial Ground. Historical-period burials have been excavated in City Hall Park, but whether these burials are those of soldiers, prisoners, Almshouse residents, or enslaved Africans has yet to be determined.

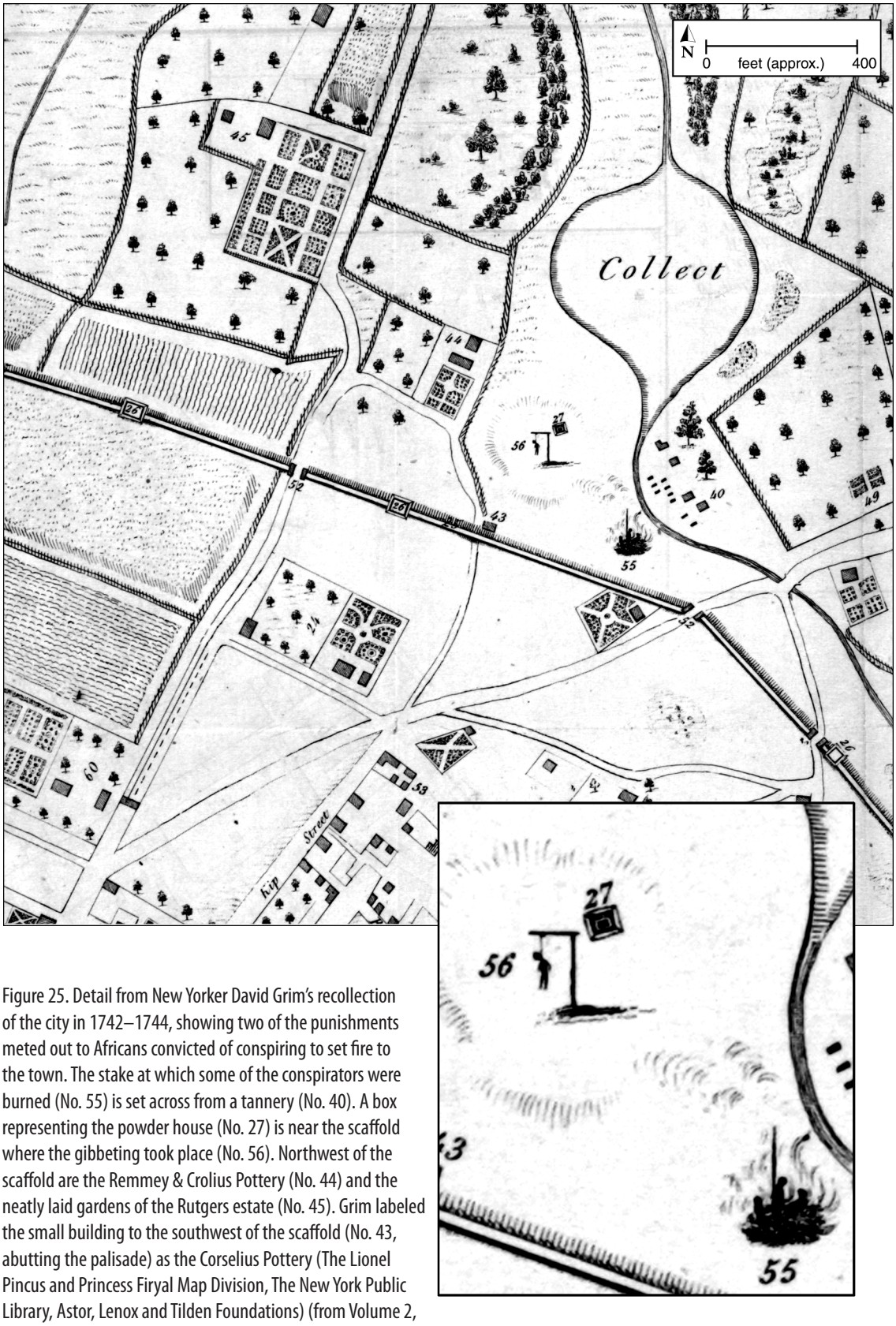


Figure 25. Detail from New Yorker David Grim's recollection of the city in 1742–1744, showing two of the punishments meted out to Africans convicted of conspiring to set fire to the town. The stake at which some of the conspirators were burned (No. 55) is set across from a tannery (No. 40). A box representing the powder house (No. 27) is near the scaffold where the gibbeting took place (No. 56). Northwest of the scaffold are the Remmey & Crolius Pottery (No. 44) and the neatly laid gardens of the Rutgers estate (No. 45). Grim labeled the small building to the southwest of the scaffold (No. 43, abutting the palisade) as the Corselius Pottery (The Lionel Pincus and Princess Firyal Map Division, The New York Public Library, Astor, Lenox and Tilden Foundations) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 18]).

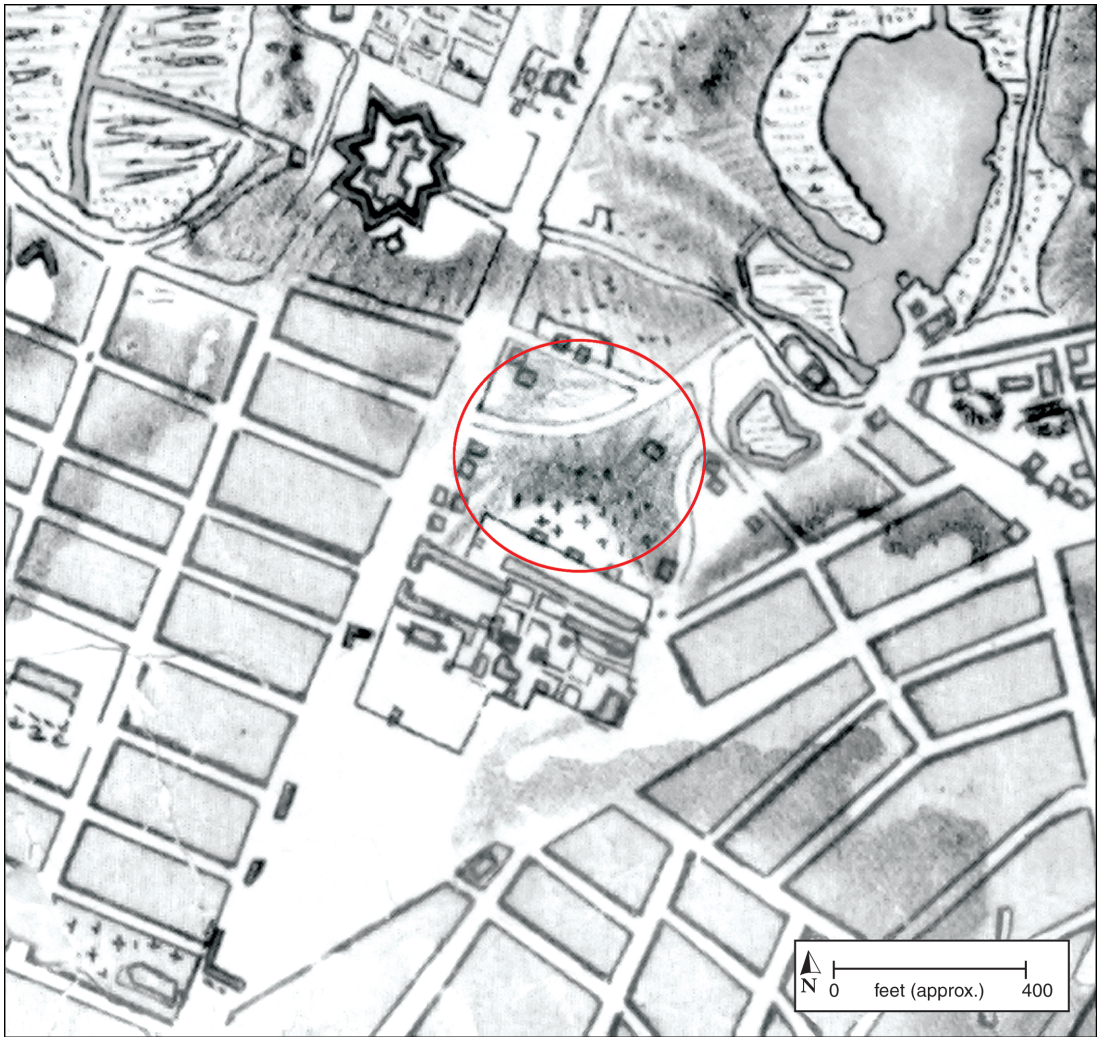


Figure 26. Detail from the British Headquarters Map (1782), showing the area behind the barracks used for interments by the occupying British forces during the Revolution. The general location of the African Burial Ground is circled. The southern portion of the African Burial Ground is stippled with crosses, a convention the mapmaker used to represent congregational, such as St. Paul's churchyard, in the lower left corner, and common burial grounds (The Lionel Pincus and Princess Firyal Map Division, The New York Public Library, Astor, Lenox and Tilden Foundations) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 21]).

The Establishment and Use of the African Burial Ground

The formation and use of the African Burial Ground has partly to do with variation in the availability of other spaces for the burial of the settlement's many Africans. The New York African Burial Ground researchers note that during the seventeenth century, many Africans in Manhattan would have been buried in one of several kinds of settings that were available for the burial of Africans: (1) farm plots, (2) congregational yards, (3) town cemeteries, or (4) the African Burial Ground (Howson, Bianco, et al. 2009). The burial of Africans, for instance, may have occurred in the yard of a chapel constructed by Peter Stuyvesant for the residents of his Manhattan *bouwerie*. Similarly, enslaved African burials may have also been permitted near the African camp at the West India Company's lumber mill on the Saw River (approximately 4.5 miles northeast of the African Burial Ground near present-day Seventy-fourth Street) (Figure 27). Africans may have also been buried in one of the town's two cemeteries, although this possibility has yet to be verified by historical records. The first town cemetery (1649–1676) was approximately three-quarters of a mile southwest of the African Burial Ground, near present-day Morris Street, north of Battery Park (Howson, Bianco, et al. 2009:35) (Figure 28). The Dutch Reformed Church "oversaw the upkeep and use of the cemetery [as well as] collected fees for the rental of the pall, straps,

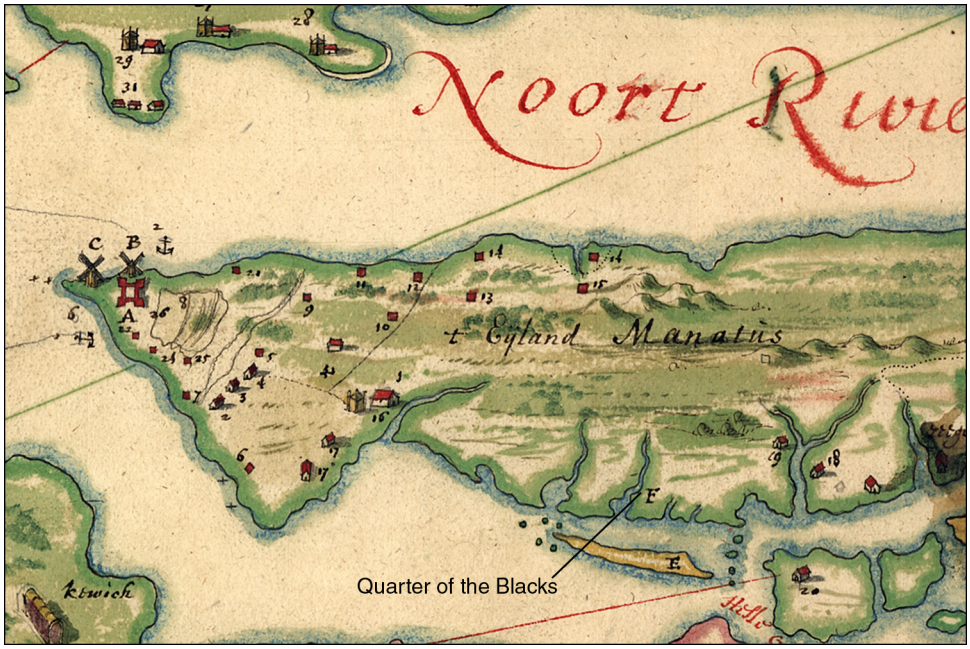


Figure 27. Detail from the Manatus Map, a depiction of New Amsterdam in 1639, with a mark ("F") showing the camp (near present-day 74th Street) where the Dutch West India Company housed African workers (Geography & Map Division, Library of Congress) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 10]).

Figure 28. The Castello Plan, cartographer Jacques Cortelyou's street grid of New Amsterdam in 1660, showing the common burial ground on the west side of the wagon road (Broadway), midway between the fort and the wall (Wall Street) (I. N. Phelps Stokes Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs, The New York Public Library, Astor, Lenox and Tilden Foundations) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 11]).

benches, and boards and for tolling the bell for the dead" (Howson, Bianco, et al. 2009:37). At least as early as 1661, and probably earlier, records for all burials were supposedly kept, but those records have not been located (Howson, Bianco, et al. 2009:37). A second public cemetery, which also could have allowed African burials, was opened later just north of the city's wall, near present-day Wall Street (Howson, Bianco, et al. 2009:35).

A fourth possible location for African burials was, of course, the African Burial Ground. The first known record of the African Burial Ground dates to 1712. In a letter dated June 23, 1712, Chaplain John Sharpe of the Anglican Society for the Propagation of the Gospel in Foreign Parts (SPG) wrote that Africans were "buried in the Common by those of their country and complexion without the office [of a Christian minister], on the contrary the Heathenish rites are performed at the grave by their countrymen" (Sharpe 1881:355, quoted in Howson, Bianco, et al. 2009:43). The New York African Burial Ground researchers hypothesize, however, that the burial ground may have been in use much earlier, perhaps as early as the 1640s (Howson, Bianco, et al. 2009:42). As stated above, parcels conveyed to half-free Africans during the 1640s hugged the northern edges of the Collect Pond and Cripplebush. Further to the south, some of the land encompassing what later became known as "The Negroes Burial Ground" was controlled by Dutch landowners.

The New York African Burial Ground researchers note that, given the long-standing presence of African residences in the general vicinity of the Collect Pond, the earliest possible use of the African Burial Ground could have been sometime between 1640 and 1660 and suggest a hypothetical date of ca. 1650 when Africans could have first interred their dead there. The land was not particularly useful for residential or agricultural development, leading the New York African Burial Ground researchers to suggest that "Dutch deed holders and the English colonial government would have abided African burials" there (Howson, Bianco, et al. 2009:42).

One event that may have precipitated use of the African Burial Ground occurred in 1697. In October 1697, the Anglican Trinity Church, which incorporated the second public cemetery into its church yard, banned the burial of Africans in its cemetery (Howson, Bianco, et al. 2009:35):

> Ordered, That after the Expiration of four weeks from the dates hereof no Negroes be buried within the bounds & Limits of the Church Yard of Trinity Church, that is to say, in the rear of the present burying place & that no person or Negro whatsoever, do presume after the terme above Limited to break up any ground for the burying of his Negro, as they will answer it at their perill [Trinity Church Archives, New York, Minutes of the Vestry, October 25, 1697].

The English held a substantial proportion of enslaved Africans in 1703 (Goodfriend 1992:76), leading the researchers to suggest that the ban "would have had a noticeable impact" on where Africans were buried during the eighteenth century (Howson, Bianco, et al. 2009:43). As burial records "are not extant prior to 1777, and churchyard headstones . . . may not have been provided to blacks" it remains possible that some African-descended communicants were buried during the eighteenth century at Trinity Church (Howson, Bianco, et al. 2009:37 n. 1). Harris (2003:35) has reported 869 baptisms of enslaved Africans at Trinity Church between 1704 and 1764, and Dodson et al. (2000:31) have written that in the 1720s, African servants regularly attended Sunday catechisms there. Nonetheless, an extremely small percentage of Africans who attended church services were church members (Harris 2003:35). A small, separate burial ground for Africans was established by Trinity Church in 1773 "on a lot bounded by present-day Church Street, Reade Street, and West Broadway" (Howson, Bianco, et al. 2009:52). Less than a quarter mile west of the African Burial Ground, the Trinity Church burial ground for people of African descent was in use until August 1795, but records for burials have not been located.[4]

[4] During the eighteenth century, other denominations may have allowed the burial of Africans in their cemeteries, but records are thin. For most churches, records are only extant for portions of the eighteenth century and are not available for much of the period when the African Burial Ground is hypothesized to have been used. In addition, some burial records pertaining to the latter half of the eighteenth century, such as the records of Christ Lutheran Church and the United Lutheran Church, have yet to be examined (Howson, Bianco, et al. 2009:37 n. 3). Dutch Reformed Church records between 1727 and 1804 recorded "five burials of Africans, and only one, Susannah Rosedale's in 1729, was opt de kirkhoff, 'in the cemetery'" (Howson, Bianco, et al. 2009:37). Only two burials of Africans were recorded during the eighteenth century for the Trinity Lutheran Church, and these were a free African woman and an illegitimate mulatto child (Mareitje van Guinea [d. 1745] and Abraham Beeling [d. 1747], respectively). Church records for the second half of the eighteenth century indicate that two Africans were buried in the Moravian Church cemetery during the 1770s (Howson, Bianco, et al. 2009:37).

The researchers note, however, that the 1697 Trinity Church ban on African burials would likely have prompted Africans to use areas of the Common for burials and thus conclude that the African Burial Ground was certainly in use by the beginning of the eighteenth century. This scenario is plausible given the fact that the first known cartographic reference to the African Burial Ground did not appear until two or more decades after its initial use, when Mrs. Buchnerd created her hand-drawn plan of the city sometime between 1732 and 1735 (Howson, Bianco, et al. 2009:44) (Figure 29). Archaeological evidence was not able to confirm or deny the hypotheses that (1) the African Burial Ground was first used around 1650, (2) the African Burial Ground was first used around 1697, or (3) the African Burial Ground was first used around 1713. Archaeological evidence suggested that the earliest burials in the sample, which may not have been the earliest burials at the burial ground, predated the establishment of the pottery in 1730, providing a hypothetical end date of around 1735 for the time range of the earliest burials (Perry, Howson, and Holl 2009a:130). No absolute terminus post quem (or the date after which burials must have occurred) could be established for the earliest burials, however, leaving open to question when the first burials took place at the African Burial Ground.

Closing of the African Burial Ground

As noted previously, the researchers found that during the Revolutionary War, the British military buried prisoners of war and deserters behind the barracks on the Common, possibly in shallow mass graves. Most were probably interred in the southern portion of the African Burial Ground, between Chambers and Reade Streets (Howson, Bianco, et al. 2009:52). The excavated portion of the New York African Burial Ground was farther to the north, probably explaining the absence of these kinds of burials in the excavated areas. The British also dismantled Teller's houses and the fence that enclosed a portion of the African Burial Ground (Howson, Bianco, et al. 2009:52). After the Revolutionary War, Sara Roeloff's heirs were eager to develop the Van Borsum patent. In 1784 and again in 1787, Henry H. Kip and the other Van Borsum patent holders petitioned the New York City Common Council (Common Council) to lay streets within the Van Borsum patent, but the Common Council was slow to respond. Around this time, to the north of the Van Borsum patent, the Calk Hook Farm was surveyed into lots. Although houses were not built immediately on these lots, lots south of Anthony Street (present-day Duane Street) may have had survey posts, or even fences, marking their boundaries. As these lots (Lots 5–17) (Figure 30) overlapped with the northernmost portion of the African Burial Ground, the researchers suggest that by 1787, burial was discouraged in the northernmost portion of the burial ground (Howson, Bianco, et al. 2009:52).

In the late-eighteenth century, grave robbing for the purposes of anatomical examination and medical experimentation was common. In 1788, public concern over grave robbing in New York City erupted into the Doctors' Riot. One of the cemeteries exploited by doctors for grave robbing was the African Burial Ground. The Almshouse cemetery on the Common and a private cemetery on Gold Street were also looted (Howson, Bianco, et al. 2009:52–53). Bioarchaeological evidence for possible grave robbing and medical dissection was discovered in a burial excavated at the New York African Burial Ground (Blakey 2009a:5) (see Chapters 7 and 8).

By the 1790s, use of the African Burial Ground was increasingly constrained by development (Figure 31). As a result, African New Yorkers began seeking new burial grounds for their dead. In 1794, a group of African New Yorkers petitioned the City to help purchase a plot of land for a new burial ground (Howson, Bianco, et al. 2009:53). The following year, in 1795, the Van Borsum plot was surveyed into lots (Figure 32). The 67 new lots were divided among Sara Roeloff's heirs, including the Tellers, Van Vlecks, and Daniel Denniston, all of whom were descendants of the Kiersteds. Chambers Street, Reed Street (now Reade Street), Ann Street, and the 20-foot-wide alley that would become Republican Alley were also surveyed at this time. That same year, the Common Council located a parcel on the former Delancey estate in the Seventh Ward as a suitable location for a new African cemetery. The Common Council agreed to contribute 100 pounds toward the purchase of the 10,000-square-foot (0.23-acre) parcel that consisted of four contiguous lots on Chrystie Street. Isaac Fortune and other members of the New York African Society for Mutual Relief successfully petitioned the Common Council for the right to develop the property, manage the burial grounds, and collect burial fees (Howson, Bianco, et al. 2009:57).

The New York African Burial Ground researchers hypothesize that around this time, in 1795, the African Burial Ground ceased to be used regularly for interment. Meanwhile, areas of the African Burial Ground continued to be filled in and developed. New York

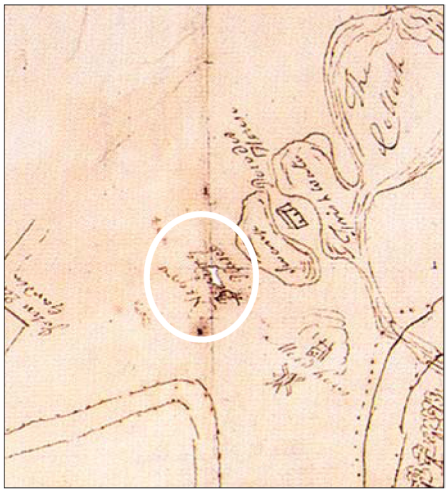


Figure 29. Mrs. Buchnerd's hand-drawn Plan of the City of New York in the Year 1735. The words "Negro Burying Place" (circled) are legible on the central fold of the manuscript, adjacent to the "swamp" on the south side of the Collect. This was the first time the cemetery was labeled on a map (I. N. Phelps Stokes Collection, Miriam and Ira D. Wallach Division of Art, Prints and Photographs, The New York Public Library, Astor, Lenox and Tilden Foundations) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 17]).

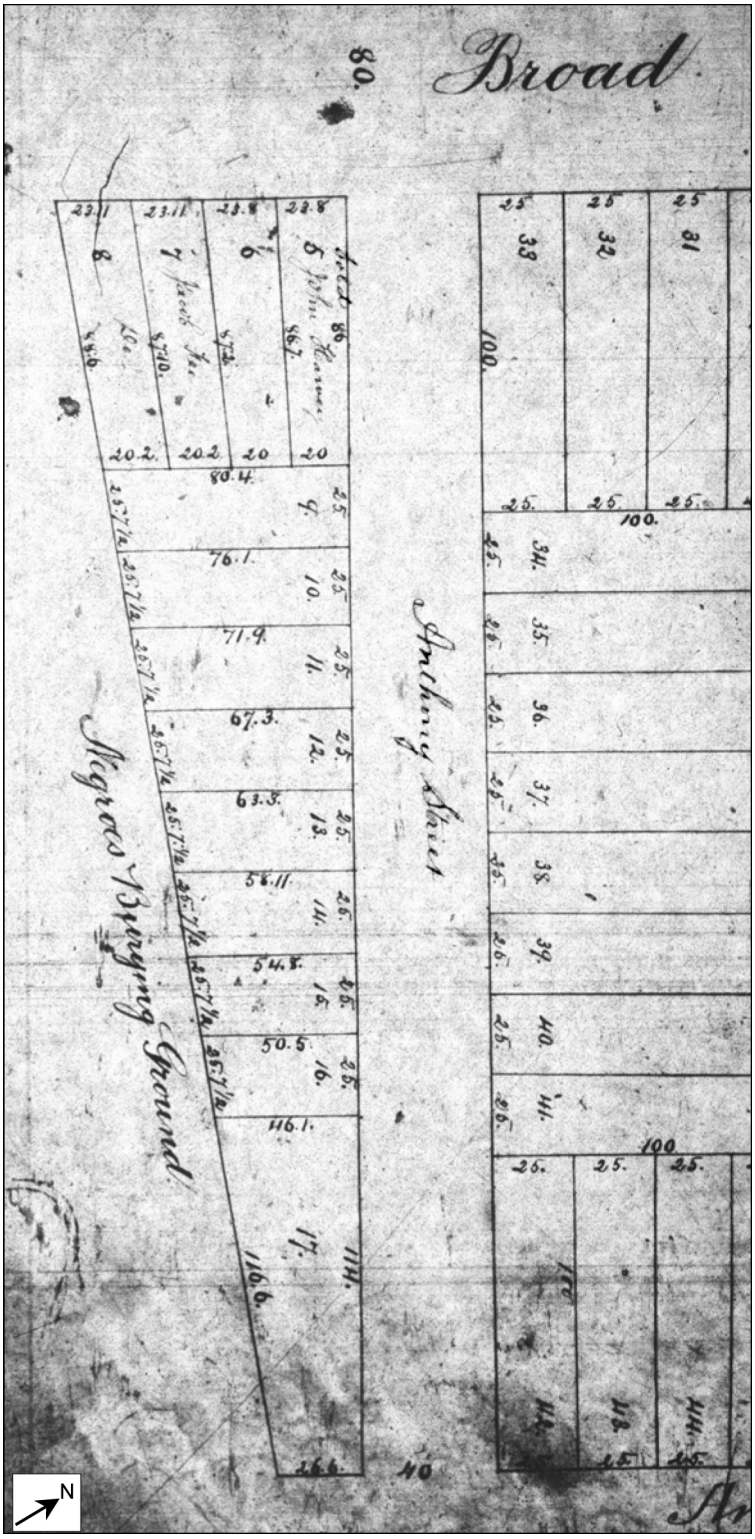


Figure 30. Detail from a 1787 surveyor's map showing the partition of the Calk Hook Farm into lots. The lots on the southern side of Anthony Street (present-day Duane), shown abutting the "Negroes Burying Ground," actually overlapped the cemetery's northern edge. Broadway crosses at the top of the map detail. Ann (present-day Elk) Street crosses at the bottom. Lot dimensions are shown in feet (courtesy of the Division of Land Records [Liber 46:140]) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 22]).

Figure 31. Detail from the Taylor-Roberts Plan, 1797, drawn by city surveyor Benjamin Taylor and engraved by John Roberts, showing the newly laid street grid that crossed the African Burial Ground at the end of the eighteenth century (The Lionel Pincus and Princess Firyal Map Division, The New York Public Library, Astor, Lenox and Tilden Foundations) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 26]).

City responded to a 1799 yellow fever epidemic by ordering lots bordering the Collect Pond to be filled in (Milne 2000:25). At the same time, laws were passed to improve cleanliness, and "old meat and unwholesome dirt were removed, standing water drained, and the practice of tossing garbage and waste into the street was restricted" (Milne 2000:25). Two thousand New Yorkers, or 3.33 percent of the City's population, are estimated to have died from the epidemic (Milne 2000:25). Fearful that decomposing corpses contributed to spread of the epidemic, the city prohibited burials within city limits but, of course, made exceptions for prominent Euroamerican churches. Several hundred black New Yorkers who succumbed to the epidemic were buried in the potter's field at Washington Square, a little more than a mile north-northeast of

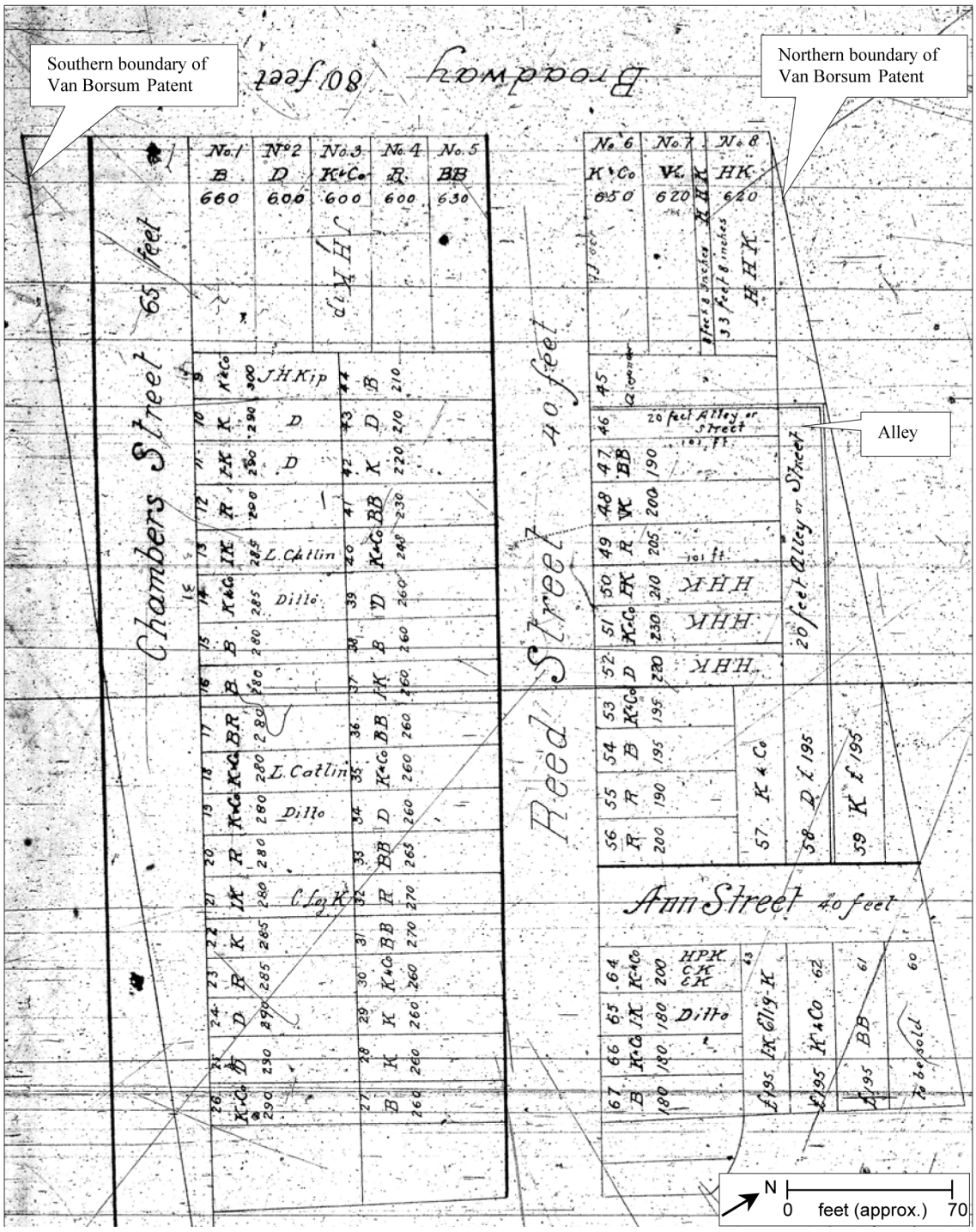


Figure 32 . Detail from a 1795 surveyor's map showing the locations of the lots assigned to Sara Roeloff's heirs. "D" stood for lots that would have fallen to the Tellers (descended from Rachel Kiersted), "F" for those of the Van Vlecks (descended from Catherine Kiersted),and "B" for Daniel Denniston (whose wife descended from Lucas Kiersted). The alley laid out from Reed Street to Ann (later Elm/Elk) Street would be shifted slightly and come to be called Republican Alley (courtesy of the Division of Land Records [Liber 195:405, Filed Map 76J]) (from Volume 2, Part 1 [Howson, Bianchi, et al. 2009:Figure 24]).

the African Burial Ground, outside what was then the city. According to Milne (2000:25), at least 41 New York Africans were buried in either the African Burial Ground or the new African cemetery on Chrystie Street as a result of the epidemic. The Board of Health again forbade burials within the city limits in 1806 and 1809. Between 1802 and 1807, as many as 750 burials were interred in a vault beneath African Zion Church, which lacked a burial ground. Originally located in a rented house on Cross Street when it was established in 1796, the African Zion Church had moved in 1800 to a new building on the corner of Church and Leonard Streets (Dodson et al. 2000:52–54). In response to this crisis, African Zion Church successfully petitioned for burial space in the potter's field at West Fourth Street, present-day Washington Square Park (Dodson et al. 2000:54; Milne 2000:25).

In 1803, continuing public health scares and the spread of development spelled an end to the African Burial Ground. The Collect Pond was drained, and the African Burial Ground was filled in with as much as 25 feet of fill in some areas (Dodson et al. 2000:53). It would be almost two centuries before the African Burial Ground was returned to public consciousness and development interests again disturbed portions of the African Burial Ground.

Archaeological Evidence for the Presence and Lives of Enslaved African New Yorkers

The New York African Burial Ground is one of several large excavations focused on historical-period archaeology that have been conducted in Lower Manhattan since 1979. Although relatively few artifacts were found with the burials at the New York African Burial Ground, burial contexts and the osteological information obtained from individual skeletons constitute an unprecedented contribution to the sparse information available regarding the bioarchaeology and material culture of diasporic Africans in colonial Manhattan. Before the discovery of the New York African Burial Ground, only limited professional investigations of historical-period sites had been conducted in the city. Investigated cultural resources in Lower Manhattan dating to the seventeenth and eighteenth centuries include

- Dutch New Amsterdam's first state house, or Stadt Huys (est. 1653);
- King's House Tavern, a temporary seat of city hall between 1697 and 1703 (Rothschild et al. 1987);
- the kitchen of the city's first Almshouse (1736–1797) (Baugher and Lenik 1997:1);
- primary and secondary context burials in the African Burial Grounds and the Commons Historic District (Anderson 2000:24; Barry 1999; Crist et al. 2000; Harris et al 1993; Hartgen Archeological Associates 2003, 2004; Hildebrant 1994, 1995; Himelfarb 1999; London 2004; Stone 1997);
- 100 feet of a wharf system used to fill in and build up lots along the East River waterfront during the late-eighteenth century (Louis Berger and Associates 1991; Cantwell and Wall 2001);
- the house and workshop of Daniel Van Voorhis, a Dutch silversmith who advertised his work as a jeweler and silversmith at 27 Hanover Square in the mid-1780s (Cantwell and Wall 2001);
- privy pits from seventeenth-century Dutch outhouses on a parcel of land purchased in 1653 by Cornelis van Tienhoven (Grossman 1985);
- a privy pit abandoned during the 1680s or 1690s on a parcel of land occupied by Sara Roeloff's daughter, Blandina, and Peter Bayard, a nephew of Peter Stuyvesant (Grossman 1985);
- Augustine Heermans's warehouse (used from the late 1640s to ca. 1665) (Grossman 1985);
- a mid-eighteenth-century landfill at 175 Water Street (Geismar 1983);
- a complex of seventeenth-century residences at 7 Hanover Square (Rothschild and Pickman 1990; Wall 2000).

A number of excavated sites have been associated with historically documented seventeenth- and eighteenth-century middle-class and upper-class residents of New York or with historically known urban facilities that were contemporaneous with use of the African Burial Ground. Enslaved Africans likely contributed substantially to the formation of nearly all of the seventeenth- and eighteenth-century sites that have been investigated in Lower Manhattan. Although archaeological evidence for the lives and livelihoods of seventeenth- and eighteenth-century New Yorkers is increasing, few archaeological studies have produced unequivocal evidence of African or African American activities in New York City during the same period. In Lower Manhattan, many sites may have deposits affiliated with enslaved or free Africans, but the dis-

tinguishing characteristics of such deposits are subtle and hard to recognize.

Wall (2000:2) has suggested two reasons to explain why enslaved Africans are rarely identified in the archaeological record of northern colonies: "First, European Americans living in the north have tended to deny the importance of slavery in the history of the region. Secondly, the nature of slavery in the north makes it much more difficult to examine than in the south." At southern plantations, enslaved Africans typically lived in separate quarters where some dominion over private space could be achieved. By contrast, most enslaved Africans in New York City lived under the same roofs as their enslavers and thus are not as clearly associated with spatially discrete domestic spaces. The difference in household organization, however, should not be taken to mean that enslaved Africans did not control, at least partially, the use of some spaces within urban households. Enslaved laborers in urban contexts lived in kitchens, garrets, and cellars and likely influenced the nature of archaeological deposits in those and other domestic spaces.

The discovery and analysis of individuals and burial contexts from the New York African Burial Ground has contributed significantly to the body of data gleaned from other sites with archaeological evidence of an African American presence. The burials provide profound testimony of African origins, the harsh conditions of daily life, and irrefutable evidence of the lives and deaths of enslaved Africans who lived and worked in the city. More work, however, needs to be done to understand the material conditions characterizing African American life in seventeenth- and eighteenth-century New York. In this section, findings at other contemporaneous archaeological sites in Manhattan are examined in terms of their bearing on the archaeology of African enslavement for the period the African Burial Ground was in use.

Using historical documentation and recently developed knowledge on archaeological contexts, artifacts, and features associated with enslaved Africans, Wall (2000) revisited the currently known archaeological record of New York City. She examined a number of existing collections from sites excavated in New York City between 1978 and 1984. These included the Stadt Huys Block site (Rothschild et al. 1987), the 7 Hanover Square site (Rothschild and Pickman 1990), the Broad Financial Center site (Grossman 1985), and the Assay site (Louis Berger and Associates 1991); possible underground caches dating to the seventeenth and eighteenth centuries were discovered at the first three sites. In most cases, these pits were lined with barrel, brick, or basket material and, in some cases, could have functioned as either drains or privies rather than caches. At the King's House Tavern at the Stadt Huys block and at the house at 7 Hanover Square, the location of pits suggests that they may have been beneath kitchen floors, locations where enslaved Africans probably worked. The locations of the other pits relative to structures are uncertain because of disturbance.

The pit at King's House tavern contained approximately 20 wine bottles and several tobacco pipes and is relatively easy to interpret as a cache of items sold at the tavern. The other pits, however, contained a variety of items—such as beads, knives, ceramic disks, mica, stone flakes, shell, and coins—that may be interpreted as associated with enslaved Africans, given other similar discoveries in diasporic contexts (e.g., Fennell 2000, 2003; Ferguson 1999; LaRoche 1994; Leone and Fry 1999, 2001; Samford 1996; Singleton 1995; Wall 2000; Wilkie 1997). Similar items were found with the burials at the New York African Burial Ground; they are discussed in Chapter 8.

Wall (2000) has also mentioned the discovery of a spoon with several *X*s inscribed in its bowl (e.g., Ferguson 1999). The spoon was recovered in sediments associated with the construction of a 1790s wharf at the Assay site. The spoon may have been intentionally deposited in the East River after having played a role in African American rituals performed elsewhere (Wall 2000). The potential association of underground caches and distinctive artifacts with African New Yorkers is exciting. At the same time, some associations are tentative, and the number of interpreted features and artifacts is few.

Documentary evidence examined by Wall as of 2000 suggests that enslaved Africans did live on some of the excavated properties she reexamined. Blandina Kiersted, a daughter of Sara Roeloff Kiersted, was willed an enslaved laborer named "Hans." Along with her husband, Peter Bayard, Blandina is believed to have lived at the property on Lot 14 when the underground cache there was deposited. Another family that held enslaved laborers, the van Tienhoven family, owned the property at Lot 8 of the Broad Financial Center site where three underground caches were found.

More than likely, artifact-depositing activities involving enslaved Africans were performed at all the sites listed above. Despite the probable contributions of enslaved Africans to historical-period deposits in Lower Manhattan, interpretations of African American contributions are scant. By contrast, the New York

African Burial Ground yielded material evidence that the researchers were able to link to findings at other African Diaspora sites and historically documented African burial practices. In some cases, the findings of the genetic and elemental analyses conducted by the skeletal biology researchers combined with the presence of items of West African provenance can be used to infer the African origins of individuals interred in the burial ground. In other cases, artifacts and other contextual data can be used to infer the implementation of African diasporic lifeways and spiritual practices. Investigation of the New York African Burial Ground raises awareness about the level of involvement of enslaved Africans in historical-period daily life and the need to develop better models for discovering and interpreting the material life of enslaved Africans in historical-period New York City and other diasporic contexts.

Recent Bioarchaeological Investigations in the Vicinity of the African Burial Ground

A number of bioarchaeological investigations have been undertaken in Lower Manhattan in the vicinity of the African Burial Ground since the New York African Burial Ground was excavated in 1991–1992. Several of these projects occurred to the south of the New York African Burial Ground in the African Burial Grounds and the Commons Historic District (Crist et al. 2000; Harris et al 1993; Hartgen Archeological Associates 2003, 2004; Hildebrant 1994, 1995; London 2004; Stone 1997). Another recently completed bioarchaeological project was located north of the African Burial Ground at the Washington Square Park Potter's Field (Geismar 2009). Although these investigations have resulted in the observation of remains from many individuals, the vast majority of those examined in detail consisted of incomplete and scattered remains found in secondary context.

Following the excavation of the New York African Burial Ground, the Landmarks Preservation Commission (2002) issued guidelines for the proper and sensitive excavation of burials in New York City. The guidelines stipulated that burials were to be exposed only to the extent necessary to determine depositional context. Primary context burials were to be left in situ after being examined by a trained bioarchaeologist and protected from further disturbance with clean fill, custom-made plywood frames, and concrete covers. Human remains found in secondary contexts could be collected and analyzed in a laboratory setting by a trained bioarchaeologist before being reburied.

For these later projects, the data from primary context burials were often more tentative and less complete than data developed for the New York African Burial Ground Project, for which the vast majority of burials were completely excavated and the remains analyzed in a laboratory setting. As a result, strict comparisons with the results of the New York African Burial Ground project are difficult to make. Because burials were not completely excavated for these later projects, the number of burials with shroud pins, coffin nails, or other artifacts, for instance, could not be known; nor could it be definitively known how many burials were stacked in the same grave shaft, as excavation did not continue below the uppermost primary context burial in a grave shaft. Much of what was learned was the result of field assessments of partially excavated primary context burials and laboratory assessments of fragmentary remains. Moreover, the samples of human remains from these later bioarchaeological projects were substantially smaller than the New York African Burial Ground sample, and intact or partially intact burials were rare.[5] Along

[5] At the Tweed Courthouse, 28 graves were found; MNI was estimated to be 39 individuals (Hartgen Archeological Associates 2003). In a Consolidated Edison trench north of the Tweed Courthouse, the remains of 12 individuals, including adults and children, were found, but no intact burials were found; the remains were examined by bioarchaeologists after construction workers had removed them from the trench (Hildebrant 1994). Human remains removed from another trench beneath Chambers Street represented approximately 6 individuals, including adult males, adult females, and children. No intact burials were found, as the recovered remains all appeared to come from highly disturbed secondary deposits. Interestingly, at least 5 elements from these remains appeared to have postmortem modifications suggestive of autopsy or dissection (Crist et al. 2000:13, 16). Additional Consolidated Edison trenches north of Tweed Courthouse revealed 10 graves that contained 11 individuals, including an adult male, a probable male, a child, and an infant. Fragmentary remains also discovered in the trenches came from at least 9 individuals, including an infant, a child of unknown age, 2 older juveniles, 3 adult females or probable females, and 3 adult males or probable males (Hartgen Archeological Associates 2004). At City Hall Park, human remains were found in 25 primary context burial features and 34 features with secondarily deposited human remains. The minimum number of individuals was estimated to be 47; the maximum number of individuals was set at 256 (Bankoff and Loorya 2008:396; London 2004:12). Individuals included infants, children, and male and female adults, although 19 of 24 adults observable for sex were male (London 2004, Tables 4 and 5). At the Washington Square Park Potter's Field, 10 intact burials and remains from a minimum of 16 individuals were found. All human remains examined at Washington Square Park Potter's Field were from adults younger than their mid-forties. The investigators attribute the lack of juveniles and older adults to a small sample size rather than arguing that it reflects the demography of the burial population (Amorosi 2009:52; Geismar 2009:42).

with small sample sizes and the effects of extensive disturbance, the incomplete nature of age, sex, and ancestry determinations in many cases prevented the construction of a detailed demographic profile for each project. The relative frequency of indicators of pathology, such as the percentage of individuals with periosteal lesions, was also difficult to determine due to incomplete information.

Despite these limitations, recent bioarchaeological investigations in the African Burial Grounds and the Commons Historic District and at Washington Square Park contributed important information on eighteenth- and early-nineteenth-century mortuary practices and quality of life of individuals of low socio-economic status. To the extent possible, investigators determined the age, sex, and ancestry of some individuals; estimated MNI from primary and secondary context remains; and examined fragmentary remains and visible portions of primary context remains for indicators of pathology.

Historic records describing the location, extent, and use of burial grounds in the African Burial Ground and the Commons Historic District are sparse and contain little specific information (Harris et al. 1993). With the exception of the New York African Burial Ground individuals, it is difficult to determine whether burials identified in the African Burial Ground and the Commons Historic District were associated with the first or second Almshouses, Bridewell prison, Revolutionary War burials, or the African Burial Ground. A lack of associated artifacts also limited the ability to infer the temporal association of many burials, although it seems likely based on historical records that many burials in the African Burial Grounds and the Commons Historic District were placed in the eighteenth century and those in Washington Square Park Potter's Field in the early nineteenth century. A clear association with a specific burial ground was ascertainable only for the Washington Square Park Potter's Field investigations. It is possible that at least some human remains in the African Burial Ground and the Commons Historic District came from burials placed originally within the historical limits of the African Burial Ground, rather than in the other burial grounds listed above. This is particularly the case for burials found underneath or close to Chambers Street, as Chambers Street coincides roughly with the estimated location of the southern boundary of the African Burial Ground. Burials identified in Washington Square Park were associated with the early-nineteenth-century potter's field at that location, but they do not appear to be associated with the portion of the cemetery used by African Zion Church.

Of the few individuals in the African Burial Grounds and the Commons Historic District whose ancestry could be assessed and who were located outside the New York African Burial Ground, all were assessed as likely of European ancestry.[6] It must be kept in mind, however, that these were preliminary field assessments that were based on morphoscopic characteristics and, for any given project, were made on relatively few individuals using limited information. Also, ancestry assessments of the type made are primarily forensic-type identifications that do not always take into account the biohistorical context of human morphology. In none of these bioarchaeological projects did artifacts or evidence for body practices or mortuary treatment provide clues to the biological ancestry or cultural origins of the deceased. As a result, it is not clear whether any of the above bioarchaeological projects in the vicinity of the New York African Burial Ground discovered the burials of African New Yorkers.

Bioarchaeological investigations have made it abundantly clear, however, that although many burials have been extensively disturbed, burials and scattered human remains can still be found in many locations on the former Common. For most projects conducted after the New York African Burial Ground Project, many human remains were found to be in secondary context and in highly fragmented condition as a result of prior disturbance, which made the number of intact or partially intact burials in some of these project areas surprising. For instance, Hartgen Archeological Associates (2003:159) note that for excavations in the Tweed Courthouse project area

> considering the extensive disturbance of the area, the fact that any intact burials remain in

[6] At the Tweed Courthouse, the few cranial elements from primary context individuals and secondary deposits were all suggestive of European ancestry (Hartgen Archeological Associates 2003:143). In one investigation of remains from a water main trench on Chambers Street, skeletal and dental remains that could be assessed for ancestry were assessed as European in ancestry (Crist et al. 2000:12). In City Hall Park, individuals who could be assessed for ancestry were assessed as being of European ancestry, "some of them specifically corresponding to known traits seen in Colonial or Historic period European individuals" (London 2004:13–14). Individuals in burials examined at the Washington Square Park Potter's Field also appeared to be of European ancestry, but again, the ancestry assessments are tentative. In some cases, no assessment of ancestry was made, due to a lack of suitable osteological materials, such as complete crania (e.g., Hildebrant 1994).

> this area is astonishing. The location of burials that remain fully or partially intact is completely random, and there really is no method for predicting where they may be located until the soils are disturbed. The only accurate prediction concerns identifying where there definitely are not burials, i.e. within recent construction trenches including those excavated during this project and other utility trenches which contain clean sand fill.

It is also clear that the same kinds of trash that were prevalent on the New York African Burial Ground were also prevalent in other areas of the Common. Based on archaeological investigations in City Hall Park, trash from potteries and tanneries appears to have been dumped in many areas of the Common where it found its way into the burial deposits of the poor (Bankoff and Loorya 2008). Presumably, trash was deposited as a result of routine disposal processes and periodic efforts to grade and fill lots.

A few similarities and differences between burials from the New York African Burial Ground and those from other areas of the Common can be noted. Unlike the findings from the New York African Burial Ground, grave shafts and coffin remains seem to have been observed less often in the more recent excavations. Because only a partial view of the feature was obtained, however, coffin hardware and remnants of coffin wood could have remained hidden in sediments that were not excavated. Also, extensive disturbance could have obliterated or obscured grave outlines or portions of coffins in some excavated areas. Thus, it is difficult to tell what factors led to the lack of a clear grave shaft outline in plan view or the lack of evidence for a coffin.

For both the Hartgen Archeological Associates (2003, 2004) investigations, around 50 percent of burial features had evidence for a grave shaft, and 50 percent of burials had evidence for coffins. At City Hall Park, many of the burials appear to have included a coffin, as evidenced by the presence of coffin nails, wood, coffin handles, or staining suggestive of a coffin outline, but the exact number is unclear. For those few coffins with a discernible shape, one was identified as tapered and two as hexagonal. Grave shafts, however, were observed less often during the City Hall Park excavations. As with other investigations, disturbance may be responsible for this pattern, as some burials were discovered immediately below asphalt, suggesting that for some features much of the grave shaft and portions of the burial were previously removed (Bankoff and Loorya 2008). At Washington Square Park, evidence for coffins was observed, but grave shafts were not. The investigators suggest the "the lack of discernible grave shafts . . . may reflect burials in large pits rather than individual graves" (Amorosi 2009:51). An alternate explanation for the lack of apparent grave shafts is that sandy sediments and frequent disturbance prevented the recognition of distinct feature outlines.

Mortuary treatment seen in burials outside the New York African Burial Ground is somewhat more variable than the highly standardized treatment observed at the New York African Burial Ground. Some burials were placed with the head facing the west, as were most burials at the New York African Burial Ground, but many were placed instead according to other orientations. For instance, of the 10 burials discovered by Hartgen Archeological Associates (2004) under the eastbound lane of Chambers Street, orientations included head to the southwest, head to the west, and head to the south. At the Tweed Courthouse, 26 burials were placed along an east-west alignment, and 2 were placed along a north-south alignment. All single interments were placed with the head to the west, whereas multiple burials in a single feature included both head to the west and head to the east orientations (Hartgen Archeological Associates 2003). The City Hall Park burials were predominantly head to the west, followed by head to the south (Bankoff and Loorya 2008). At Washington Square Park Potter's Field "burials were basically north to south," although it is not mentioned whether burials were placed with the head to the south, north, or both directions (Geismar 2009:42). Some investigators have suggested that differences in burial orientation may reflect a temporal shift from head to the west to head to the south or north, but limited temporal data from burials prevents confirmation of this hypothesis.

Another difference between burials in the New York African Burial Ground and others in the Common is that some burials in the Common appear to be mass graves. At the Tweed Courthouse, one ossuary-like deposit of disturbed remains was found (Hartgen Archeological Associates 2003). Two ossuary-like pits were also found during the City Hall Park excavations; one pit had the remains of 18 adults and 3 children, and the other had 1 male adult and 23 children (Bankoff and Loorya 2008; London 2004). Neither mass graves containing multiple primary context burials nor secondary deposits of reburied remains from multiple

individuals were observed at the New York African Burial Ground.

The available evidence suggests that some of the same burial attire that was seen at the New York African Burial Ground may also have been afforded to eighteenth-century burials in other areas of the Common as well nineteenth-century burials at Washington Square Park. Many individuals appear to have been buried in shrouds, as evidenced by either the presence of shroud pins or green, cupric staining on skeletal elements. One individual at Washington Square Park, for instance, had cupric staining on lumbar vertebrae, hips, and forearms, which the investigators interpreted as having resulted from the use of shroud pins (Amorosi 2009:51). At City Hall Park, cupric staining was found on many cranial elements in a mass grave as well as on individual elements redeposited in other features. Actual shroud pins were found in several burial features (Hartgen Archeological Associates 2003).

Few other artifacts were found in association with human remains for any of these projects, including buttons associated with clothing, personal adornments, or coffin hardware. At the New York African Burial Ground, such items were found but were rare. We do not know in most cases, however, whether the lack of such artifacts for these later projects is partly the result of the nature of the samples (which are small, heavily disturbed, and partially excavated), factors of preservation, or a tendency not to deposit such artifacts in burials. Whether the remains examined were from enslaved laborers, Almshouse residents, prisoners, or executed prisoners of war, all would have been poor and with few possessions. A lack of kin or friends to contribute to or oversee a funeral may have meant that personal possessions or offerings rarely were placed into the burials examined during these excavations. Given the lack of buttons or other clothing fasteners, many individuals may have been covered only with shrouds and buried without street clothes.

Collectively, bioarchaeological investigations of burials in the African Burial Ground and the Commons Historic District and in the Washington Square Park Potter's Field suggest that people of lower socioeconomic status in eighteenth- and early-nineteenth-century Manhattan were buried according to mortuary treatments that were in some ways similar to those observed at the New York African Burial Ground. A clear picture of mortuary treatments is lacking, however, due to extensive prior disturbance, small samples, and incomplete excavations. Most burials both within and outside the New York African Burial Ground appear to have been of individuals placed in supine position with hands placed at the sides or crossed at the waist. Burial along an east-west alignment with head to the west was overwhelmingly common at the New York African Burial Ground. The same orientation was also fairly common for other bioarchaeological investigations in the African Burial Ground and the Commons Historic District and in the Washington Square Park Potter's Field, but burials oriented with head to the south, head to the north, head to the east, or head to the southwest were also observed. Differences in orientation could represent a temporal shift in mortuary practice, but this is unclear from the available evidence. Coffins, including tapered and hexagonal forms, were used in burials outside the New York African Burial Ground, but may have been used less often than they were at the New York African Burial Ground. Evidence for clothing or personal adornment was extremely rare in burials outside the New York African Burial Ground. Artifacts interpreted as personal adornment were found in a few cases at the New York African Burial Ground, where burial in street clothes was also observed, particularly among adult males who may have died during the Revolutionary War. Shrouding appears to have been the most common form of burial attire, as was the case at the New York African Burial Ground. Mass graves containing many individuals as well as secondary ossuary-like deposits were observed at Tweed Courthouse and City Hall Park, but neither scenario was witnessed at the New York African Burial Ground. Overall, the available evidence suggests the possibility that little care and attention was provided to the burial of the City's prisoners, prisoners of war, and abject poor, perhaps due to a lack of kin to oversee burial or to the oversight of municipal or military authorities who placed greater emphasis on expedience, health concerns, or cost savings in providing for burials.

Conclusions

The New York African Burial Ground research has provided the world with evidence that thousands of Africans were forcibly migrated to New York and enslaved there. Although there is still little awareness of the presence of slavery in Colonial period and Early Federal period New York, historical research demonstrates that many Africans were forcibly migrated to

New York as a result of the provisions trade or were forcibly migrated directly from Africa. Some enslaved Africans were brought from parts of West Africa, West Central Africa, and Southeast Africa. Others were born in New York, the West Indies, or other parts of North America. Still other enslaved laborers in New York were Native Americans or Spanish prisoners of war. The majority of the individuals interred at the African Burial Ground, or perhaps their ancestors, were brought to New York City between 1624 and 1795 as enslaved laborers and endured the harsh conditions of slavery until they were buried. Others may have arrived in New York City as runaways during the Revolutionary War (1776–1783). Although the individuals buried at the African Burial Ground were probably not afforded many choices in their daily lives, many may have been buried by kin in African-controlled spaces according to rituals that befitted their diverse origins (see Chapter 8).

Although New York's deep economic and political involvement in slavery has been largely forgotten or overlooked in the popular consciousness, the exploitation of enslaved labor was fundamental to development of the early Dutch settlement of New Amsterdam and later, as a major port city of the British colonies. African labor literally built and sustained the city. Despite the onus of slavery, many free and half-free New York Africans acquired farm acreage early on in the Dutch settlement of New Amsterdam. Initially at the outskirts of the settlement, African-owned areas of Manhattan later became prime real estate. Landowning New York African families contributed substantially to feeding the settlement as well as to protecting the Dutch from attack, but New York African landowners were eventually pushed out of their landholdings because of prejudice, greed, and fear.

Restrictions placed on the locations of New York African burials may have prompted the formation of the African Burial Ground as a local African American religious institution. The African Burial Ground could have had its beginnings as early as 1650 and was almost certainly fully operational by the early 1700s. The African Burial Ground was largely contained within private land during the period of use, but it also overlapped in space with activities and facilities that were located on the Common. As such, portions of the African Burial Ground were subject to numerous disturbances and desecrations over time. Also, as a result of development, areas available for interment were subject to increasing attrition over time. At first, African Americans were able to freely use the African Burial Ground partly because of its remote location as well as the limited residential or agricultural utility of the land. As the city expanded, however, development encroached on the African Burial Ground. Urban crowding and public health scares pushed African burials farther toward the outskirts of the city. Eventually, multiple processes conspired to put an end to further burial at the African Burial Ground.

African New Yorkers responded proactively to this threat. By the late-eighteenth and early-nineteenth centuries, free African New Yorkers associated with local institutions such as the New York African Society for Mutual Relief (est. 1808) and African Zion Church (est. 1796) were instrumental in securing new areas for New York African burials. The researchers note that as the African Burial Ground was filled in and new urban development covered the cemetery, it was not forgotten by descendants (Perry, Howson, and Bianco 2009:374). African American community members probably kept a watchful eye on the areas where their loved ones were buried, even as the area was developed and the original land surface was removed from sight. The researchers consider that, as an African American institution that had thrived for over a century, the African Burial Ground did not die out, even as it was covered up. Instead, the legacy of the African Burial Ground lived on through the development of new African American institutions in Manhattan, such as the city's first African American churches.

Many studies of contemporaneous sites in Lower Manhattan provide information on the occupations and daily lives of Euroamericans and the kinds of artifacts and features expected at contemporaneous sites. Few have yielded unambiguous evidence concerning the activities of enslaved Africans, despite the prevalence of enslaved laborers in New York during the seventeenth, eighteenth, and nineteenth centuries. This problem arises partly because of inherent difficulties in identifying and interpreting archaeological patterns associated with enslaved Africans as well as biases in historical documentation. Another part of the problem may stem from a lack of awareness among archaeologists concerning the level of African American involvement in historical-period daily life as well as a lack of appropriate methods for identifying African American deposits or inferring African American behavioral inputs. The lack of contemporaneous African American landmarks underscores the unique importance of the New York African Burial Ground and the need to focus more investigation on

African American archaeology in Lower Manhattan. At the same time, the problem also underscores the relevance of the project's broad diasporic perspective, which entailed interpreting the African Burial Ground within the context of the history, culture, and biology of the African Diaspora. The relevance of the project findings to broader diasporic contexts are explored in the chapters to follow.

Chapter 4

Processes of Enslavement: Origins and Identity

A major research theme of the New York African Burial Ground research design and an important theme in African Diaspora studies is that of origins. New York African Burial Ground researchers studied where seventeenth- and eighteenth-century enslaved laborers in New York came from, how they were brought to the colonies, what they retained, what they lost, and what they created. To this end, New York African Burial Ground analyses linked artifacts, mortuary practices, body practices, and individual life histories to specific geographic areas or macroethnic groups.

To recover and disentangle information on the origins of individuals interred in the New York African Burial Ground, the researchers conducted multiple studies of history, material culture, and bioarchaeology. These included historical investigations into the African roots of enslaved Africans; examination of structural, demographic, and economic aspects of the transatlantic trade in enslaved Africans; and consideration of identity formation in New York and other colonies. Artifact and feature types and archaeological patterns discovered at the New York African Burial Ground were interpreted in terms of how the people expressed identities and forged continuities with African heritages. Skeletal biology studies examined aspects of cranial morphology and tooth morphology to assess phenotypic affinities, and isotope and elemental-signature studies documented variation in the migration and life histories of individuals. Finally, ambitious and innovative genetic studies were initiated to discern the genetic heritage of enslaved laborers in seventeenth- and eighteenth-century New York City.

Defining the Identity of Enslaved Laborers

The geographic and ethnic origins of seventeenth- and eighteenth-century enslaved laborers were diverse. Most enslaved Africans exported to the Americas were forcibly migrated on thousands of vessels at numerous ports along a 3,000-mile stretch of African coastline, from Senegal in the north to Angola in the south (Posnansky 1999), with smaller numbers exported from Southeast Africa.

A pioneer in the study of African survivals in the Americas, Herskovits (1941:295, quoted in Greene 2000:86) has been criticized for defining "the civilizations of the forested coastal belt of West Africa and the Congo . . . as forming one of the major culture areas of the continent." In this rendering, the diverse cultural backgrounds of enslaved Africans are considered more similar to each other than they are different (Greene 2000; Mintz and Price 1992). Greene (2000) has argued that, as a first approximation, Herskovits's (1924, 1941) claim of West African similarities has some merit, as there are some unifying characteristics of West African groups. The tendency to lump diverse groups from West and West Central Africa into a single designation, however, has recently met with considerable criticism. Africa is a huge continent consisting of diverse environments, culture histories, ethnic groups, religions, economies, and political organizations. Reliance on Anglophone literature and dependence on the thesis that enslaved African ethnicities were fragmented and randomly redistributed through processes of enslavement has led to the conclusion that

specific ethnic identities were not reconstructed or maintained in the Americas. More-recent research, however, demonstrates the value of investigating the experiences of enslaved Africans according to subregional ethnic affiliations and finer geopolitical distinctions. Such affiliations are relevant to social organization and identity formation of enslaved and free Africans in the Americas, particularly at the New York African Burial Ground.

Historically, there was considerable uncontrolled variation in how enslaved Africans were ethnically identified by captors, making the historical reconstruction of enslaved African ethnic identities a difficult and somewhat speculative task (Posnansky 1999:25). Because of historical ambiguity and the enormous complexity of historical processes, previous research tended to dismiss ethnic labels for enslaved Africans as European impositions that were ascribed independently of real African-derived identities. More recently, investigators have deciphered patterning and social meaning in the use of ethnic labels to understand the variable cultural backgrounds of enslaved Africans and to study diasporic identity formation in the New World. Toward these ends, the New York African Burial Ground research expanded the scope of research in African American archaeology to include consideration of broadly scaled processes and trends occurring on both sides of the Atlantic basin. In this way, the researchers were able to develop a more nuanced and historically accurate portrait of the origins and identities of the individuals buried in the New York African Burial Ground and generate many hypotheses for future testing.

The Transatlantic Trade in Enslaved Africans

Increasingly, investigators conceptualize the experience of enslaved Africans in the Americas in the context of a broadly defined, transnational, and transatlantic zone of interaction and exchange (e.g., Gilroy 1993; Vlach 1998). Enslaved Africans were part of a protracted and complex African Diaspora that resulted in the dislocation and transplantation of more than 11 million Africans to the Americas (cf. Curtin 1969; Eltis 1990, 2001; Lovejoy 1982, 1989). As a result of the trade in enslaved Africans, more Africans were forcibly migrated to the Americas than the Europeans who brought them (Davis 2000). Also, far more African women were migrated to the Americas during the sixteenth and seventeenth centuries than European women. The number of Africans that were killed in wars that articulated with the trade in enslaved Africans or who were enslaved in Africa is even larger. In terms of its human costs, the transatlantic trade in enslaved Africans was "the most vicious, longest-lasting example of human brutality and exploitation in history" (Hall 2005:8). Enslaved laborers were part of a giant and complex system of transatlantic and regional trade that involved interactions between people in Africa, Europe, and the Americas and the frequent long-distance movement and exchange of people, vessels, manufactured items, staple foods, technologies, genes, cosmologies, and lifeways (Law and Mann 1997; Morgan 1997).

The British, Portuguese, and to a lesser extent, the Dutch were heavily involved in the transatlantic trade in enslaved Africans. Trade began with the Portuguese during the mid-1400s (Hall 2005; cf. Fergus 2008; Medford, ed. 2009) with the establishment of conquest states along the coast of West Central Africa, where enslaved laborers were acquired through warfare and alliances with African polities. By the late 1500s, the Portuguese had established military and political footholds along the coast of West Central Africa. In 1575, they established the Reino de Angola between Bengo and the Kwango in areas formerly controlled by the Ndongo and Kongo states. In the early 1600s, they established the Reino de Benguela south of Luanda in areas controlled by Imbangala and Ovimbundu polities (Heywood and Thornton 2009b:9). Under Portuguese influence, large numbers of enslaved Africans worked as soldiers in Portuguese military campaigns or on African plantations run by missionaries or were exported to Brazilian plantations (Heywood and Thornton 2009b:11).

The Portuguese trade was substantial, exporting 45.9 percent of all enslaved Africans between 1519 and 1867. They effectively book-ended the trade, with huge exports between 1519 and 1650 and again between 1801 and 1867. Between 1490 and 1521, the Portuguese forcibly migrated on the order of 2,300–4,800 enslaved Africans per year from the Mauritanian Coast, Upper Guinea, Gulf of Guinea, and West Central Africa (Elbl 1997). The total estimated transatlantic trade in enslaved Africans between 1450 and 1521 was more than 150,000 individuals (Elbl 1997:Table 7). Between 1519 and 1600, Portugal forcibly migrated around 264,000 enslaved Africans, controlling 99 percent of the export trade, and between 1600 and 1650, they forcibly migrated almost 440,000

enslaved Africans (Eltis 2001:Table 1). Between 1617 and 1621 alone, the Portuguese forcibly migrated from the port of Luanda as many as 50,000 captives to Brazil (Heywood and Thornton 2009b:11).

The British were also quite active, securing a 28.1 percent share of the trade between 1519 and 1867. After the Dutch and English began to take over Spanish American markets for enslaved Africans around 1650, Portugal forcibly migrated its enslaved Africans almost exclusively to Brazil. The British dominated the trade between 1651 and 1800, the period during which the African Burial Ground was in use. During this period, there were five British voyages for every four Portuguese voyages. Although Dutch participation in the trade in enslaved Africans was largely contemporaneous with British participation, the Dutch tended to control less than 10 percent of the trade at any point in time. Still, the Dutch forcibly migrated a large share of enslaved Africans (27 percent of 239,800 enslaved Africans) between 1651 and 1675, which would have included importations to New Amsterdam prior to the British takeover in 1664. In other periods, the Dutch forcibly migrated much smaller shares of the market in enslaved Africans (Eltis 2001).

Information on vessels leaving the Caribbean or mainland North America is less complete than records for European vessels. This problem has required some speculation regarding the actual volume of the Caribbean and North American trade. Eltis (2001) has estimated that between 1714 and 1807, around 2,000 vessels carrying approximately 220,600 enslaved Africans outfitted their voyages from ports in mainland North America, with an estimated mortality rate of 6.8 percent. Around 550 voyages left from ports in the Caribbean during the same period, carrying around 59,400 enslaved Africans, with an estimated mortality rate double that of the U.S. ships, or 13.8 percent. Overall, between 1519 and 1867, a minimum of 11,062,000 enslaved Africans were forcibly migrated to the Americas by European or American factors, with an estimated overall mortality rate of 13.2 percent (Eltis 2001). Many more than 11 million individuals could have been forcibly migrated to the Americas, if the many undocumented aspects of the trade, including illegal trade to avoid tariffs, and an incomplete documentary record are taken into account.

Enslaved Africans disembarked at many different ports in North America, South America, and the Caribbean. Regions of disembarkation included

> mainland British North America (including Mississippi), the British Windwards and Trinidad together, the British Leewards, Jamaica, Barbados, all the Guianas together, mainland Spanish America, the Spanish Caribbean, Brazil north of Bahia, Bahia, Brazil south of Bahia, the Dutch Caribbean, the French Windwards, St. Domingue, and finally, all other Americas, 90 percent of which comprises the Danish islands [Eltis 2001:31].

Eltis (2001) has estimated that between 5 and 10 percent of recent arrivals were quickly transshipped to other ports as part of the intra-American trade. New York, Guadeloupe, and the Mississippi region, for instance, received most of their imports from other parts of the Americas rather than directly from Africa (Eltis 2001; Medford, ed. 2009).

Eltis (2001) has estimated that if 10 percent of enslaved Africans originally shipped to the Caribbean were later transshipped to mainland North America, around 400,000 enslaved Africans were imported into mainland North America. Numbers provided by the *Transatlantic Slave Trade Database* indicate that less than 4 percent of enslaved Africans imported into the Americas were brought to mainland North America. An even smaller percentage would have ended up in New York. Despite this, at different times during the eighteenth century, African New Yorkers, most of whom were enslaved, typically represented 8–21 percent of the population (Medford, Brown, Carrington, et al. 2009a; Rankin-Hill et al. 2009) (Table 3). The population density of enslaved Africans in New York was large by North American standards. Of the northern colonies, New York was the most heavily involved in the trade in enslaved Africans, and, as an urban context, New York was second only to Charleston, South Carolina, in terms of the number of Africans enslaved there (Davis 1979, 1984).

In the historiography of the transatlantic trade, a common perception regarding the age and sex of enslaved Africans forcibly migrated to the Americas is that most enslaved Africans were adult males. There is some historical basis for this supposition, as some traders reportedly sought to obtain two males for every female (data cited in Thornton [1992:167 n. 80]). However, adult females also appear to have been more highly valued than adult males by internal African markets. At the same time, there was considerable spatial and temporal variation in the sex ratios and in the proportion of enslaved Africans imported as chil-

Table 3. Population of New York County, 1698–1800

Year	Total	Black	White	Percent Black
1698	4,937	700	4,237	14.2
1703[a]	4,391	799	3,592	18.2
1712	5,861	975	4,886	16.6
1723	7,248	1,362	5,886	18.8
1731	8,622	1,577	7,045	18.3
1737	10,664	1,719	8,945	16.1
1746	11,717	2,444	9,273	20.9
1749	13,294	2,368	10,926	17.8
1756	13,046	2,278	10,768	17.5
1786	23,614	2,107	21,507	8.9
1790	31,225	3,092[b]	28,133	9.9
1800	57,663	5,867[c]	51,796	10.2

Note: From Foote (1991:78) and White (1991:26) (from Volume 3 [Medford, Brown, Carrington, et al. 2009a:Table 2]).

[a] The 1703 figures are taken from the census of households in New York City.

[b] Includes 1,036 free and 2,056 enslaved blacks.

[c] Includes 3,333 free and 2,534 enslaved blacks.

dren (Eltis 1990, 2000, 2001). During the trade, there were times and places where females predominated or where children formed a much larger percentage of enslaved Africans. Over time, for instance, some plantation systems saw the value in increasing the proportions (as well as improving the treatment) of adult females so as to promote natural population growth (Hall 2005). These kinds of changes were observed in colonial New York. Early on, many enslaved Africans were adult males, but many females were later brought in for domestic service. Children also predominated at times because of their value to learning trades and providing domestic service as well as the reduced threat they imposed upon enslaving populations (Medford, Brown, Carrington, et al. 2009c:62–63).

Sex ratios and proportions of children varied not only because of variation in demand and labor markets but also depended on demographic and economic conditions at places from which enslaved Africans were derived. Variation in the age and sex structure of enslaved Africans forcibly migrated to colonies in British America would have likely had significant and varied demographic and economic effects in both Africa and Americas (Medford, ed. 2009). For instance, although adult captives forcibly migrated to major British colonies were more often male, females were slightly more common than males among enslaved Africans imported to British colonies between 1658 and 1713 from the Bight of Biafra. Similarly, although the vast majority of enslaved Africans imported to the British colonies during the same period were adults, a substantial percentage of enslaved Africans from West Central Africa were children (Eltis 2000:Tables 9.3 and 9.4).

The British colonies, New York included, were major consumers of enslaved African labor. Although more than 40 percent of all enslaved Africans were forcibly migrated to Brazil, 29 percent of enslaved Africans imported to the Americas ended up in the British Americas. Fewer enslaved Africans, by contrast, were brought to Spanish America (14.3 percent) or the French Caribbean (12 percent) (Eltis 2001).

As alluded to above, different industries placed different demands on enslaved labor. Also, variability in the backgrounds and skills of enslaved Africans sometimes affected the kinds of tasks they performed and which markets they were sold into. The sugar industry in Brazil, Mexico, and the Caribbean appears to have created the greatest demand for enslaved labor. Tobacco farming in the Chesapeake and Bahia

and rice cultivation in the Carolinas had smaller markets. Although cotton is often associated with enslaved labor in the United States, cotton became a major crop in the United States only during the nineteenth century and was not the impetus for earlier labor exploitation. Gold and silver mining demanded a fair amount of enslaved labor in Spanish America and Minas Gerais, Brazil, but mining booms were also associated with large imports of free and indentured European labor (Eltis 2001). The ethnicity and special skills of enslaved African laborers sometimes determined the tasks that they would perform in the New World. For example, the *vaqueros* on Hispaniola estates were Africans from the Wolof, Mandinka, or Malinke, and Fula areas, which had strong pastoral traditions (Thornton 1992:135). Given the experience of many enslaved Africans in soldiering and warfare, settlers throughout the New World found enslaved Africans invaluable to military campaigns, particularly where colonists were threatened by Native Americans. Other enslavers may have taken advantage of African skills in ironworking or textile manufacture. Certainly, smithing and sewing were common occupations for enslaved laborers in New York City (Medford 2009:xix; Medford, Brown, Carrington, et al. 2009c:55). In short, the transatlantic trade in enslaved Africans was enormously complex, varying along multiple historical, political, economic, and demographic dimensions. At the same time, there are important regularities that investigators are beginning to discover; these regularities help to better understand the origins and identities of enslaved Africans in the Americas, including the individuals interred at the New York African Burial Ground.

Processes of Enslavement

In addition to understanding the origins of enslaved Africans interred in the New York African Burial Ground, the researchers also endeavored to understand how African New Yorkers came to be enslaved. Enslavement took place according to multiple processes in seventeenth- and eighteenth-century West and West Central Africa. At different times, people from diverse cultures and geographic areas were captured and enslaved by different factions who operated in different areas and engaged multiple strategies for enslavement. Varying conditions in West and West Central Africa had substantial impacts on the contours of the trade. The seventeenth and eighteenth centuries were times of tremendous political fragmentation and consolidation, warfare, and lawlessness in many parts of West and West Central Africa. Many Africans who were ultimately enslaved in the Americas were captives of raiding and warfare associated with widespread political and civil unrest or victims of related processes (Heywood and Thornton 2009a:29), which makes it difficult to summarize the complex political history of the areas where Europeans acquired enslaved Africans.

A major debate in the historiography of the transatlantic trade in enslaved Africans involves consideration of whether African or European interests drove trade in enslaved Africans (Medford, Carrington, et al. 2009:35–36). One perspective emphasizes that African agency played a major role in driving the trade in enslaved Africans. In this view, Africans captured and enslaved other Africans in the process of warfare, expansion and state-building, and internal conflicts; Europeans traded valuable goods for enslaved laborers in a trade largely controlled by Africans (Thornton 1992). Variation over time with regard to the locations from which most enslaved Africans were purchased and in the distribution of enslaved Africans according to age and sex implies to some investigators that African agency played a role in structuring the trade (Eltis 2000, 2001; Richardson 2001).

An opposing perspective argues that European demand for enslaved laborers and other commodities motivated political unrest and conflict in Africa. Indeed, the transatlantic trade in enslaved Africans had profound demographic and economic effects on Africa (Lovejoy 1989; Rodney 1982). In this view, the supply of European weapons and demand for enslaved laborers facilitated or encouraged violent conflict and enslavement, and kidnapping and banditry became rampant in Africa because of European demand for enslaved Africans (Hall 2005; Inikori 1982).

Bailey (2005:62, 65) has argued that although African agency is apparent in the trade in enslaved Africans, that does not imply that Africans and Europeans were equal partners in enslavement. African polities had little influence outside their own continent, and motivations for engaging in the trade in enslaved Africans were very different among Africans and Europeans. Moreover, differences in local political and economic conditions and variation in the size and organization of kingdoms engendered a great deal of variation in how rulers and their agents were able to influence and direct the trade in enslaved Africans. Recent work has examined the ways in

which Africans responded to the threat of enslavement, by developing defensive structures and settlements, by attacking slaving vessels, or by becoming involved in the trade in enslaved Africans to protect their own people from enslavement (Diouf 2003). Medford, Carrington, et al. (2009:37) observe that "these studies show that Africans responded to the slave trade in complex, multidimensional ways that varied with societies' individual circumstances and collective abilities."

Processes of enslavement included armed conflict, raiding and kidnapping, purported criminal activity, and debt resolution. In some cases, people were kidnapped and enslaved while working their fields or traveling between villages (Medford, Carrington, et al. 2009:37). In other cases, people were accused and convicted of adultery or theft and, as punishment, were sentenced to enslavement. Criminal charges that led to enslavement escalated as the demand for enslaved Africans grew (Medford, Carrington, et al. 2009:37). In still other cases, people were captured as prisoners of war during military campaigns and enslaved (Handler 2002; Medford, ed. 2009). Wars of expansion resulted in the enslavement of large numbers of people and allowed the conquerors to grow large surplus crops, increase revenue, and build armies and personal wealth. Enslaved laborers also were used to centralize authority and build loyalty (Thornton 1992).

In the late-sixteenth century, systematic raiding by militaristic bands known as Imbangalas had "virtually depopulated whole provinces" (Heywood and Thornton 2009b:10). Some of the first enslaved Africans acquired by the Portuguese may have been captured during Imbangala raids. Numerous civil wars that occurred between 1615 and 1640 in the Kingdom of Kongo also resulted in many captives forcibly migrated into the trade in enslaved Africans (Heywood and Thornton 2009b:11). The Portuguese themselves also captured and enslaved Africans in conflicts on African soil as well as used African agents, called *pumbeiros*, to purchase captives at the close of conflicts and at markets in Ndongo and the Kingdom of Kongo.

In West and West Central Africa, enslaved Africans were often transported after being captured from their homelands to coastal ports to be traded for European or American commodities (Medford, ed. 2009). Thornton (1992:11) has argued that "exports tended to be drawn from those slaves who were recently captured and had not yet found a place in the society of their enslavers." Enslaved Africans came from large and small polities with varying degrees of exposure to European lifeways and urban environments. States like Kongo or Ndongo consisted primarily of commoners led by minorities of ruling elite. It is suspected that most captives brought to the Americas were non-elite members of societies that had both free and enslaved labor statuses. According to Posnansky (1999), many of the West African coastal communities from which captives were traded were newly established. At coastal trading centers, the Akan-Asante civilization may have contributed mainly non-Asante captives captured by the Asante, rather than the Asante themselves. Many enslaved Africans were from smaller, interior, stateless societies that were devastated by political and economic conflict (Posnansky 1999:24). Politically and militarily weaker societies that supplied most enslaved laborers have received far less ethnographic and historical attention than the larger polities which captured them. The rural areas, not urban centers, were most negatively affected by processes of enslavement.

Supply Methods

European traders operating along the coast of West and West Central Africa acquired enslaved Africans by two different supply methods—shipborne trade and the factory system (Medford, Carrington, et al. 2009:36). Shipborne trade, or "coasting," did not involve established trading posts. Captives were instead acquired in coastal towns and cities when and where they were available. According to this method, European slave ships traveled along the coast of West Africa or West Central Africa and assembled cargos of enslaved Africans along the way. Trade along the West African coast was initially conducted entirely from ships, and this remained the predominant pattern along some coastal areas (DeCorse 2001a:12). During the eighteenth century, shipborne trade was more common in the Ivory Coast, Liberia, the Niger Delta, and Sierra Leone (Medford, Carrington, et al. 2009:36). Theoretically, a single vessel on a single voyage could have loaded enslaved Africans from many different ports. In practice, slaving vessels usually made only one or two stops. Eltis (2000:248) has noted that of 15,548 voyages recorded in *The Transatlantic Slave Trade Database*, "only 1,785 of these, or 11.5 percent, are recorded as trading at two or more places and only 812 voyages, or 5.2 percent, traded at another place of trade *outside* (emphasis in original) the region in which the first trade occurred."

The number of stops made by Europeans seeking enslaved Africans varied geographically. In the zone European geographers called Lower Guinea—the area encompassing the western Ivory Coast to Cameroon—it was fairly common for British, French, and Dutch ships to draw enslaved Africans from two stops, according to the process referred to as "coasting" (Thornton 1992:192–193). In the Senegambia region and on the Angola Coast of West Central Africa, the one-stop approach was more common (Thornton 1992:193). The ship trade was especially important to the French, who were never able to establish forts along the coast (DeCorse 2001a:25).

According to DeCorse (2001a), shipborne trade in enslaved Africans was a direct outgrowth of trade in gold. It is not coincidental, he has written, that "two of the regions of West Africa that saw the most intensive European activity were areas that afforded comparatively easy access to the gold-producing areas of the interior" (DeCorse 2001a:12). Interior trading posts were established along rivers that were navigable by ship. During the seventeenth century, enslaved labor replaced gold as the primary export from the Gold Coast.

In contrast to shipborne trade, the factory system involved established, fortified supply points where enslaved laborers were held prior to sale. Europeans built approximately 60 forts along the Gold Coast for the trade in enslaved Africans (Medford, Carrington, et al. 2009:36). Some of these forts were small; others, such as Elmina on the Ghana coast, were commanding edifices. The Portuguese used these forts to deter other Europeans, to accumulate and store goods, and to confine captives prior to a ship's arrival. Major forts that have been studied archaeologically are Elmina (DeCorse 1992, 2001a) and Savi (Kelly 1995, 1997; Kelly et al. 1999). Such forts were crucial trading outposts and the focus of European rivalries. At forts, enslaved Africans from multiple areas of the interior were held in cramped conditions awaiting sale. Forts acted as choke points where enslaved Africans from vast areas were funneled. As a result, embarkation points were remarkably fewer in Africa when compared to the number of corresponding disembarkation points in the New World.

Enslaved Africans were often associated (through naming conventions) with the ports where Europeans acquired them. For example, Elmina, variously listed as Mina, Amina, Aminra, and Aminer, became a trope for Akan-speaking people from the Gold Coast (DeCorse 2001a:27). Many enslaved Africans were transported to ports from other areas, however, and, as such, were probably ethnically affiliated with nonlocal groups. The colonial European practice of assigning geographic surnames to enslaved Africans, such as Angola, Kongo, or Kormantine, partly reflects the ports from which they were forcibly migrated. There is some reason to believe, however, that individuals imported from the same regions during certain periods were ethnolinguistically, if not politically or economically, similar (Chambers 2000, 2001; Thornton 1992). Thornton (1992:194–195) has argued that well-established trade relations among African societies created enduring trade routes that served local traffic and transatlantic economies. Therefore, "virtually all slaves exported from a port would be from the cultural zone that was already united by commerce in other goods" (Thornton 1992:194).

Regional Processes

During the seventeenth and eighteenth centuries, enslaved Africans were acquired from multiple regions in West Africa, West Central Africa, and Southeast Africa as well as transshipped from the West Indies (Medford, ed. 2009). Below, brief information is presented on the regions where many enslaved Africans who ended up in New York were obtained: Senegambia, the Gold Coast, the Bight of Benin, the Niger Delta, Southeast Africa, and the West Indies (Heywood and Thornton 2009a:29). In each of these areas, economic, religious, political, and legal factors affected enslavement processes in varied ways. This discussion makes clear that there was no single trade in enslaved Africans. Instead, the trade in enslaved Africans varied according to geographic region, political processes, religious factors, and supply and demand. The trade also changed dramatically through time (Heywood and Thornton 2009b; Medford, Brown, Carrington, et al. 2009a; Medford, Carrington, et al. 2009).

Senegambia

Trade, politics, and Islam were factors predisposing Senegambia to participate in the trade in enslaved Africans. Senegambia was, like some other regions, unified by navigable river systems that linked coast and interior (Figure 33). Centering on the Gambia and Senegal river basins, the greater Senegambia region included the modern nations of Senegal, Gambia, Guinea-Bissau, and Guinea, along with parts of Mali and Mauritania. Trade along the major rivers predated

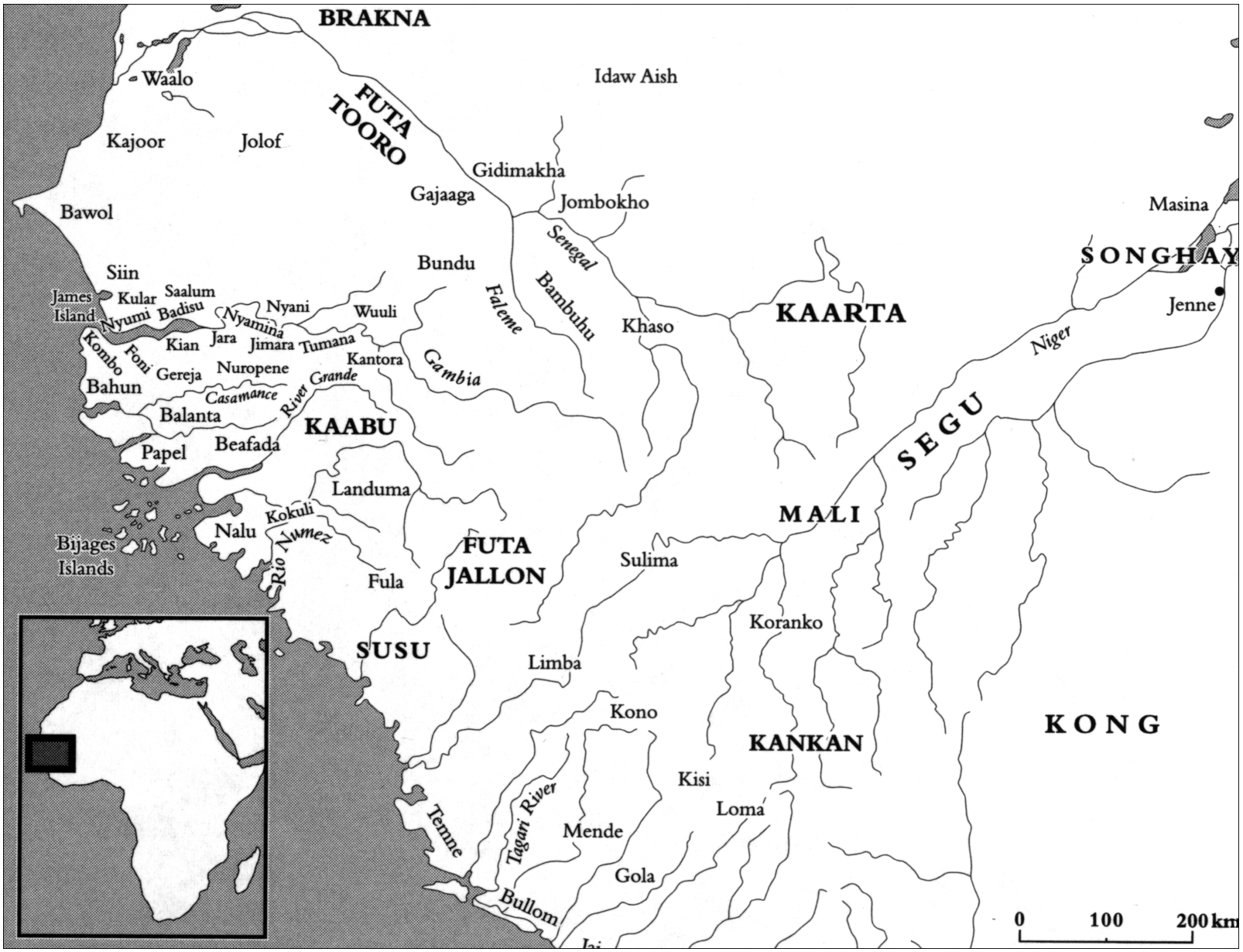


Figure 33. The Senegambia Region, West Africa. (Adapted from *Warfare in Atlantic Africa, 1500–1800,* John Thornton, ©1999, UCL Press. Reproduced by permission of Taylor & Francis Books UK.) (From Volume 3 [Heywood and Thornton 2009a:Figure 7].)

European incursions and later fed Euro-African trade. In Senegambia, "frequent incursions from the desert Arabs and the Moroccans . . . often created major political and military upheavals" (Heywood and Thornton 2009a:29). When civil wars troubled the Senegambian states in the late-seventeenth and eighteenth centuries, rulers seeking power sought European weapons, often by selling captives, creating what Thornton calls the "gun-slave" cycle (Thornton 1992:125).

Although Islamic peoples never fully controlled the region, they did at times force tributary relationships on African polities, such as the Senegal polity of Futa Tooro in the second half of the eighteenth century (Heywood and Thornton 2009a:29). The Moroccans were instrumental in the establishment of regional trade networks but were never able to control trade networks connecting the Senegal river systems to the Atlantic. Frequent political fragmentation and upheaval during the eighteenth century complicated Islamic involvement with the Atlantic trading system. Nonetheless, Islamic trading networks "helped to integrate the Senegambia, as traders went from one part of the region to another carrying goods and transporting people for sale" (Heywood and Thornton 2009a:31).

During the seventeenth century, the Portuguese, Dutch, British, and French all vied for control of trading posts in the Senegambia region. Originally settled by the Dutch in 1621, Gorée Island, for instance, was taken by the Portuguese in 1629 and again in 1645, the British in 1667, and the French in 1677. The French settled the island of Saint-Louis in 1659, near the mouth of the Senegal River. At the mouth of the Gambia, the British established a trading post at Fort Saint James in 1651. In the late-seventeenth century, the French monopolized trade along the Senegal with the establishment of Fort Saint-Joseph in Gajaaga. The British controlled trade along the Gambia River, which was navigable year-round, with the establishment of Fort Saint James and additional trading posts farther upriver. The Dutch lost a strong foothold in the region beginning in 1677, while the Portuguese, British and Dutch competed for control of the rivers south of the Gambia (Boubacar 1998). Boubacar (1998:72) notes that "in the eighteenth century, spheres of influence established earlier generally remained unchanged. Senegambia remained under French, British, and Portuguese control, with the Dutch mounting sporadic incursions on the Mauritanian coast." The French controlled the Senegal River Valley, the British controlled the Gambia River Valley, and the Portuguese controlled the southern rivers. Thornton (1992:194) has written that each port "served a distinct hinterland: the Senegal Basin, the Gambia Basin, the creek and lagoon network of the Rivers of Guinea, and the coastal waterways and river routes of Sierra Leone." During the eighteenth century and the latter half of the seventeenth century, Senegambia was a major source for enslaved Africans shipped to the Americas, although exact numbers are difficult to establish. Boubacar (1998) estimates that during the eighteenth century somewhere around 6,000 enslaved Africans were shipped each year to the Americas from Senegambia, most of them by the British or French. While the African Burial Ground was in use, as many as half of enslaved African New Yorkers would have been from the Senegambian region (Medford, Brown, Carrington, et al. 2009a:48). Many Senegambian New Yorkers would have been shipped directly to New York from Africa by the British and thus may have often come from the Gambia River Valley.

The Gold Coast

Gold was the prime mover in trading operations along the Gold Coast in the seventeenth century and the initial lure for European activities in the region. The lust for gold set the stage for trade in enslaved Africans, but political struggles were also significant. Extending "from Assine in the Ivory Coast to the Volta River in modern Ghana," the Gold Coast was also known as "Mina," or "the Mine" (DeCorse 1992:164). The Portuguese interest in gold was so great that they imported enslaved laborers to the Gold Coast region in exchange for gold (Elbl 1997; Kea 1982; Rodney 1969; Vogt 1979). Africans of diverse origins took refuge from conflicts taking place elsewhere in Africa in the many independent sovereign states of the Gold Coast region (Figure 34). Migration into the Gold Coast region resulted in the coexistence of displaced people from different areas and the development of multilingual and multicultural interactions in the region.

By the first half of the eighteenth century, the many independent sovereign states of the region began to consolidate and centralize political power into larger, more powerful polities such as "Denkyira, Akwamu, Akyem, and Asante" (Heywood and Thornton 2009a:32). The Asante emerged as the most powerful state, using large armies and state-constructed roads to control the region and deter the competition. The Asante also consolidated their power by forming alliances with neighboring states (Bailey 2005:70).

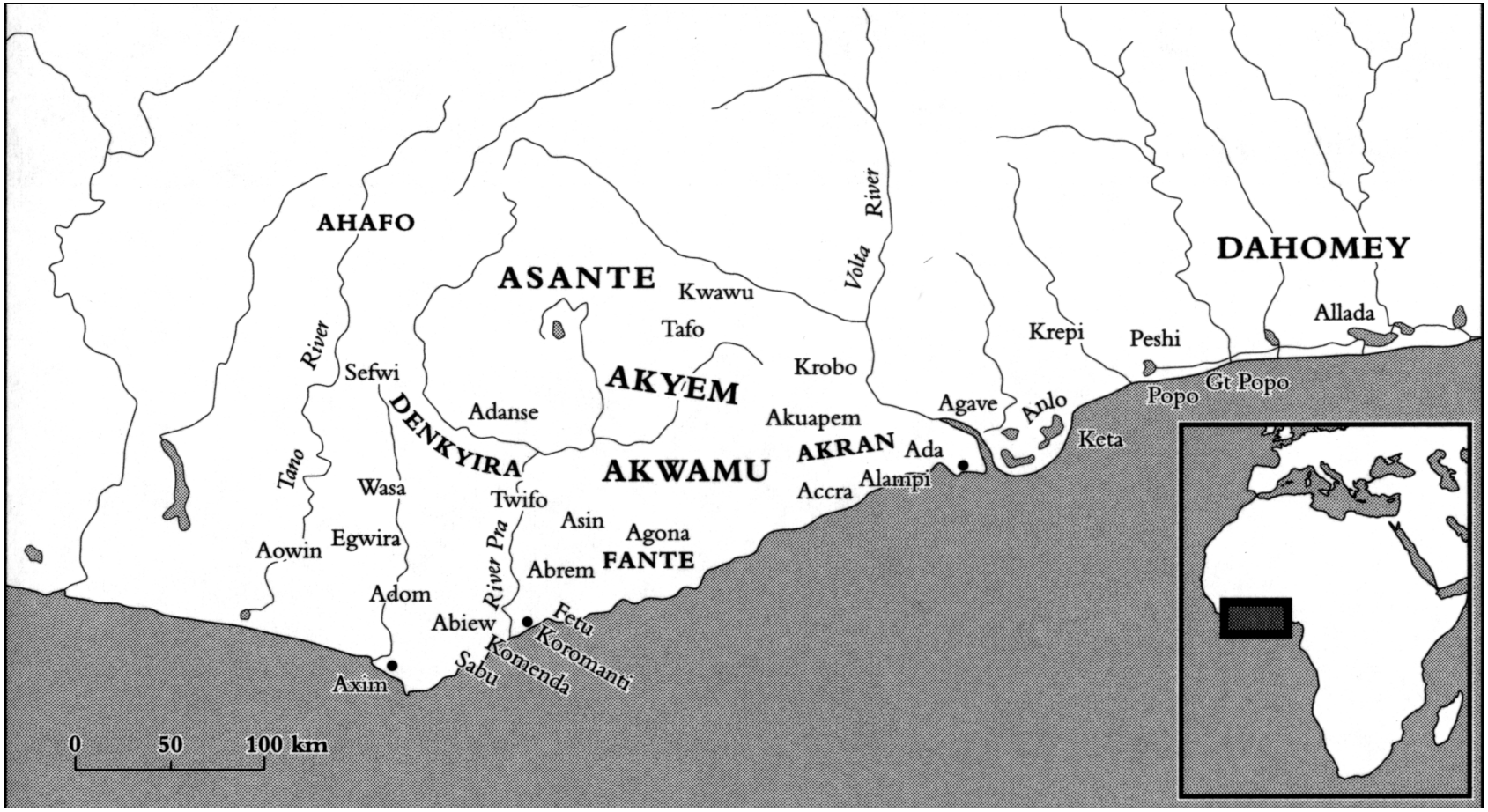


Figure 34. The Gold Coast and Slave Coast, West Africa. (Adapted from *Warfare in Atlantic Africa, 1500–1800,* John Thornton, ©1999, UCL Press. Reproduced by permission of Taylor & Francis Books UK.) (From Volume 3 [Heywood and Thornton 2009a:Figure 8].)

The Asante were traders of cotton, salt, oil, pottery, and gold (Bailey 2005:83). They also played an important role in the trade in enslaved Africans. Salaga in northern Ghana was founded in the sixteenth century and overrun by Asante forces in 1744, who subsequently took over neighboring states and incorporated them as tributary states into the kingdom. Consequently, the Asante maintained control of the important Salaga market in enslaved Africans, Dagbon, and regions to the north (Bailey 2005:84). Kumasi, the center of Asante control, was also central to known slave-trade routes. Cormantines from the Gold Coast region were considered a powerful force in the New York region. Based on records compiled by the researchers (Medford, Brown, Carrington, et al. 2009a:48-49, Tables 6 and 7), around 17 percent of documented imports of enslaved African New Yorkers whose region of origin could be determined were from the Gold Coast region, more than half of those documented shipped direct from Africa. Medford, Brown, Carrington, et al. (2009a) explain that captives from the Gold Coast region would have been common between 1701 and 1730 when the British were especially active in the region and that people identified as Coromantee would have included Asante, Ardra, Yoruba, Adja, Fon, Popo, and Gur peoples.

The Bight of Benin

Owing to its early and intense involvement in the trade in enslaved Africans, the Bight of Benin was often referred to during the seventeenth and eighteenth centuries as the "Slave Coast." Although the label shifted through time as the trade fluctuated, the "Slave Coast" ran from the Volta River east to the Lagos channel, about 200 miles, incorporating the Gulf or Bight of Benin. It corresponds to modern southeastern Ghana, the Republics of Togo and Benin, and a small section of Nigeria (Law 1991:13). Early on, the Bight of Benin region was neither politically nor ethnically unified. Polities in the Bight of Benin region included the Ewe, whose coastal polity Anlo was known to European traders; the Hula (or Pla), whose major settlements were known to Europeans as Fulao and Popo; Hueda, with its capital at Savi; Ouidah; and the kingdom of Allada. The interior kingdoms of Fon and Dahomey had capitals located on rivers (Law 1991:15–17) (Figure 35). Despite political fragmentation, the region was reasonably united linguistically.

Geography influenced the development of the region as a trading center. The so-called "Benin gap," a major interruption of the belt of tropical rain forest, facilitated communication between the coast and the interior and encouraged the concentration of European slaving activities there. The grasslands were a major resource for the Oyo Empire, whose military power rested principally in cavalry (Heywood and Thornton 2009a:33). The coastal lagoons also provided a navigable system of waterways running parallel to the coast (Heywood and Thornton 2009a:33; Law 1991:19–22).

During the seventeenth century, areas extending along the coast of the Bight of Benin region were largely integrated into a single polity, the empire of Benin. With the faltering of Benin's power, other smaller local powers, such as Allada and Ouidah, gained control of segments of the coast. During the late-seventeenth and early-eighteenth centuries, Allada's power began to wane as a result of internal disorder, conflicts regarding European trade, and banditry (Law 1991). By 1720, the Kingdom of Dahomey began to consolidate power. Dahomey seized control of Allada in 1724 and Ouidah in 1727 (Heywood and Thornton 2009a:33; Law 2004). Over the course of the eighteenth century, Dahomey created a highly centralized political power whose "king had substantial legal powers to distribute land, oversee commerce, and determine who could and could not conduct business in certain commodities" (Heywood and Thornton 2009a:33). Dahomey's political power in the region, however, was kept in check by the Oyo Empire, a northern Yoruba polity that drew power from "great cavalry armies" (Heywood and Thornton 2009a:33).

Widespread trading networks were well established in the coastal region. Salt and fish from the coast were traded over great distances along the coast through the lagoon system and into the interior. Imports included cotton cloth, which was sold to Europeans as well as worn locally; gum; and gemstones used to make beads (Law 1991:45–46). Basic foodstuffs were also traded. Trade was state-controlled and was monetized through the currency of cowry shells, brass *manillas*, and iron bars (Law 1991:48, 50).

The Portuguese developed a regular trade with Allada and Popo. Enslaved Africans were purchased for use on the plantations of São Tomé and Brazil, along with ivory, cloth, and provisions. The Dutch interest in trading for enslaved Africans, which was initially minimal, accelerated with the takeover of São Tomé and Pernambuco in Brazil and was sustained with the development of sugar cultivation in the Caribbean. The West India Company began purchasing enslaved Africans for Brazilian plantations in 1635,

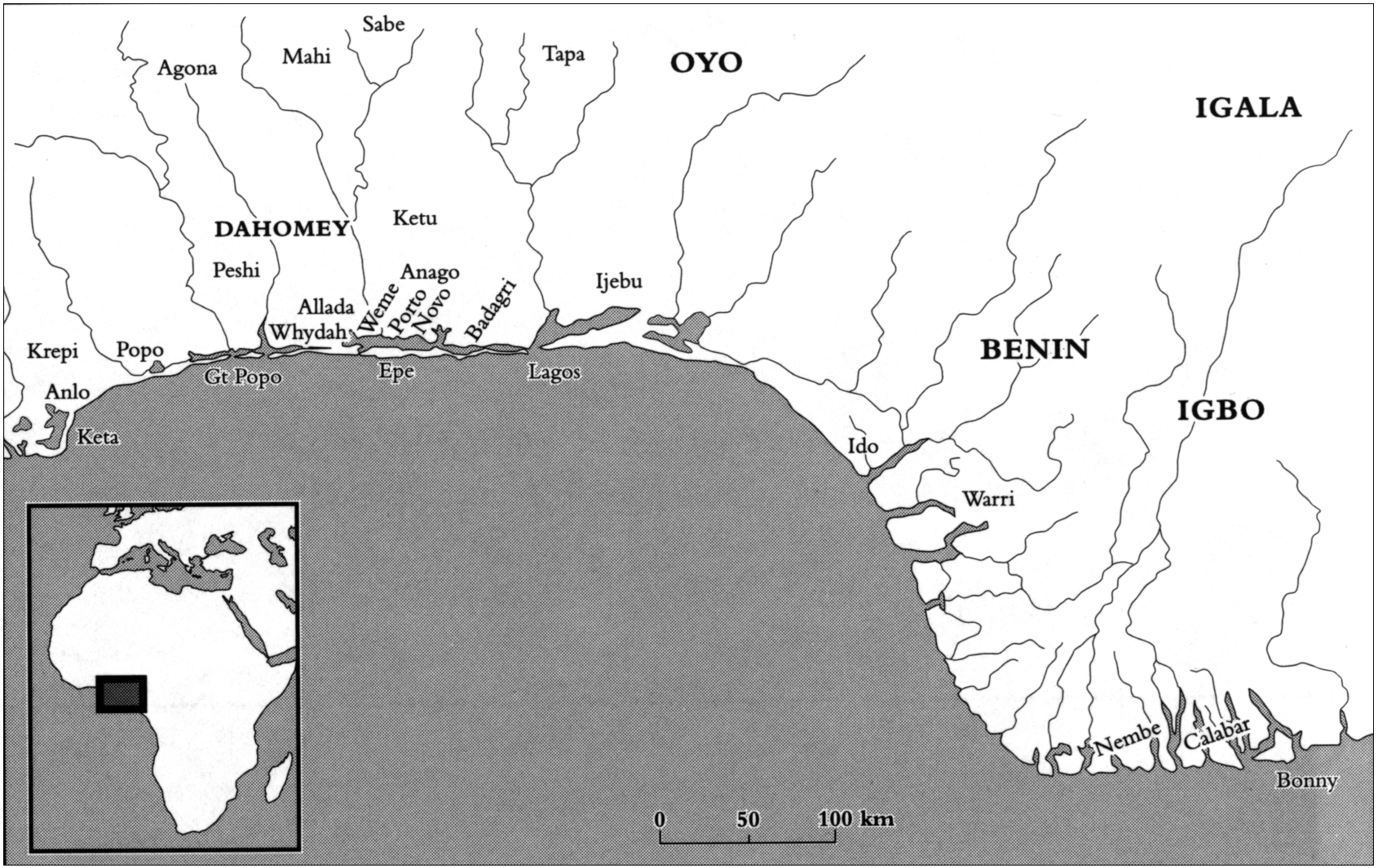


Figure 35. The Bight of Benin and Niger Delta, West Africa. (Adapted from *Warfare in Atlantic Africa, 1500–1800,* John Thornton, ©1999, UCL Press. Reproduced by permission of Taylor & Francis Books UK.) (From Volume 3 [Heywood and Thornton 2009a:Figure 9].)

and one of their supply areas was the Benin coast, particularly Allada. The French, by contrast, focused on Ouidah. The Royal African Company began trading at Ouidah in 1681, and, for a time, the English emerged as the victors in the competition to control Ouidah (see discussion in Law [1991]). Ships' logs recorded only a small proportion of African New Yorkers as coming from the Bight of Benin, and all of them via the West Indies, but the researchers note that the number could have been substantially higher given the large number of enslaved Africans forcibly migrated to Jamaica and Barbados, Caribbean islands from which many Africans were shipped to New York (Medford, Brown, Carrington, et al. 2009a:48).

The Niger Delta

At the southern tip of the Bight of Benin was the Niger Delta region, also referred to as the Bight of Biafra region, which included the eastern coast of modern-day Nigeria and the northern coast of modern-day Cameroon (see Figure 35). Thornton (1992:19) has pointed out that the Niger River "provided a corridor that ultimately added the Hausa kingdoms, the Yoruba states, and the Nupe, Igala, and Benin kingdoms to a hydrographic system that was ultimately connected to the Atlantic." Creeks and rivers in the Niger Delta "made navigation easy and connected the region widely" (Heywood and Thornton 2009a:33). Canoe men from the Christianized kingdom of Warri, a major port south of Benin, "traveled far and wide on trading missions" (Heywood and Thornton 2009a:34). In the Niger Delta, the mouths of major waterways were controlled by city-states such as Elem Kalabari (New Calabar), Ibani, and Ndoni. Europeans never ventured upstream past the city-states, where the Igbo occupied numerous independent villages, but the majority of enslaved Africans forcibly migrated from the Nigerian Delta region were likely Igbo from the interior (Heywood and Thornton 2009a:34). The researchers note that Igbo from this region arrived in New York in large numbers during the 1740s and 1750s, when the British increased trade in the region. Around 18 percent of arrivals with documented origins came ultimately from the Bight of Biafra region, via the West Indies (Medford, Brown, Carrington, et al. 2009a:48–49).

West Central Africa

Prior to the eighteenth century, the Portuguese and Dutch acquired enslaved Africans along the coast of West Central Africa in areas where Africans and Europeans had long interacted. Later, in the eighteenth century, many enslaved Africans were brought to coastal markets from areas in the interior. Enslaved Africans from the interior were transported along three major trade routes—"across Kongo to the Mpunda region (located some 200 miles from the Atlantic coast), east of the Kwango to Kongo ports and Luanda, and from the Benguela hinterland" (Medford, Carrington, et al. 2009:40). To the British, the northernmost of these trade routes, the route that "tapped population sources from the Kongo, Teke, Dembos, and Loango hinterland," was the most important (Medford, Carrington, et al. 2009:40). Along these trade routes, African traders (*vilis* or *mubires*) transported enslaved Africans from the interior to the ports of "Loango Bay, Malemba, and Cabinda, where British slavers were located" (Medford, Carrington, et al. 2009:40) (Figure 36). Africans from the interior had less exposure to European lifeways than their coastal neighbors and brought with them cultural heritages that differed from people enslaved earlier by the Portuguese and Dutch (Medford, Carrington, et al. 2009:40–41).

West Central Africans constituted 92.8 percent of enslaved Africans imported to the Americas between 1601 and 1650. After 1650, West Central Africans constituted around 40 percent or less of the Atlantic trade. In absolute numbers, importations of West Central Africans steadily increased from 1650 to 1800. Over a quarter of the 3.1 million West Central Africans imported into the Americas were imported between 1776 and 1800 (Medford, Carrington, et al. 2009:Table 1; Miller 2002). West Central Africans would have been less common in New York City than individuals from West Africa, particularly during the eighteenth century, but nonetheless constituted around 12 percent of enslaved African New Yorkers whose origins were recorded in ships' logs (Medford, Brown, Carrington, et al. 2009a:48–49).

Southeast Africa

As the *Transatlantic Slave Trade Database* and other sources indicate, a substantial number of enslaved Africans in New York were not from West Africa or West Central Africa but instead from Southeast Africa. From the 1670s to around 1721, some enslaved laborers imported into New York were Malagasy from Madagascar. The Malagasy could be traded for around "10 shillings' worth of English goods as compared with the 3- to 4-pound cost for

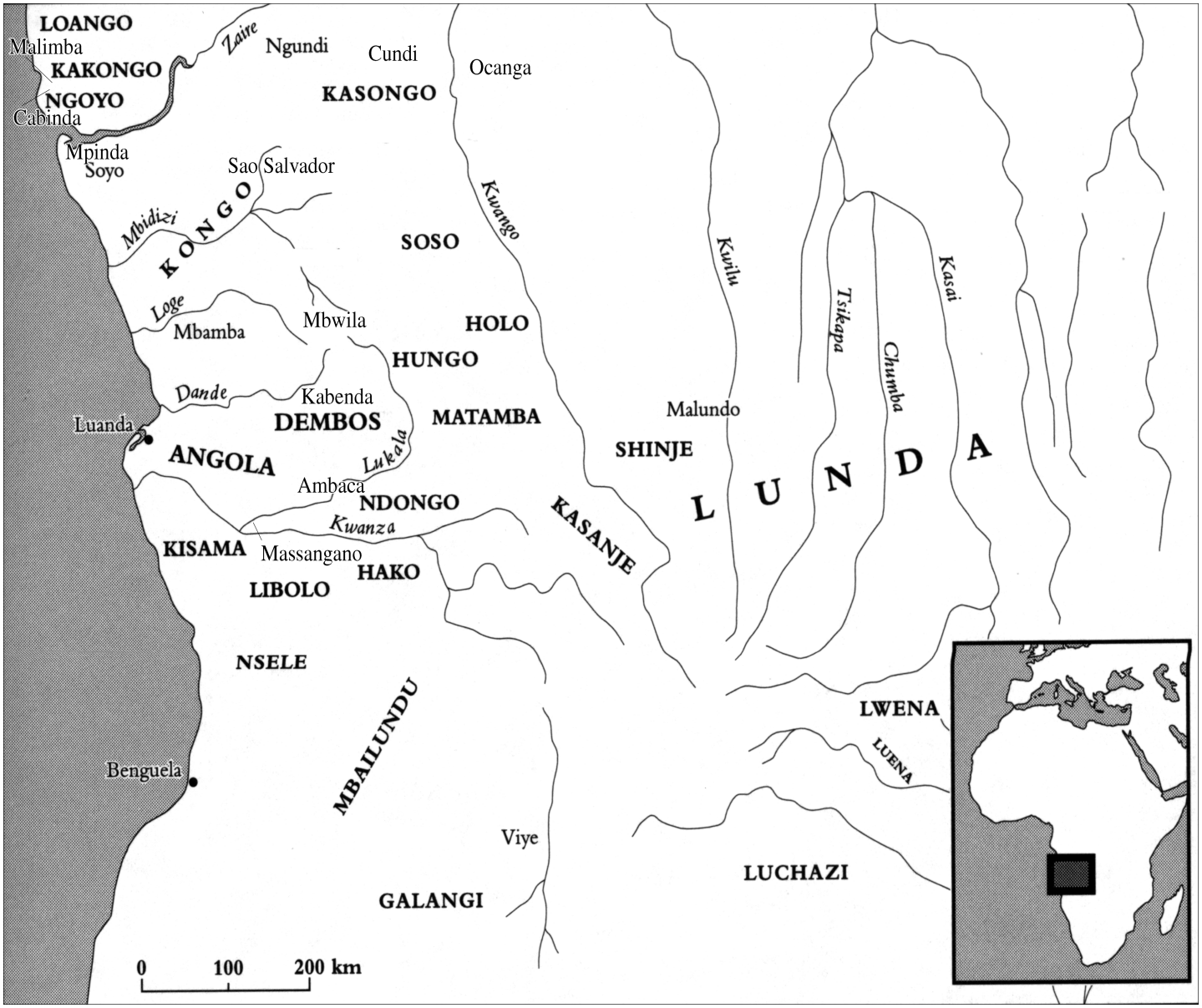


Figure 36. West Central Africa, Kongo-Angola Region. (Adapted from *Warfare in Atlantic Africa, 1500–1800,* John Thornton, ©1999, UCL Press. Reproduced by permission of Taylor & Francis Books UK.) (From Volume 3 [Heywood and Thornton 2009b:Figure 3].)

Africans on the West Coast" (Medford, Brown, and Carrington 2009:25).

Malagasy laborers were acquired through illegal trade with pirates, some of whom were stationed at St. Mary's Bay, Madagascar, and were supplied with food, rum, gunpowder, and other commodities by New York merchants. The ship *Fortune* is believed to have made yearly voyages to Madagascar to acquire enslaved laborers (Berlin 1998; Lydon 1978; Medford, Brown, and Carrington 2009:25; Platt 1969).

The West Indies

Many enslaved laborers were forcibly migrated to New York from islands in the British West Indies—particularly Jamaica, Antigua, and Barbados. Smaller numbers were imported from St. Kitts (British and French), Montserrat and Nevis (British), Curaçao and St. Eustatius (Dutch), St. Thomas (Danish), and Hispaniola (French) (Medford, Brown, Carrington, et al. 2009a:44) (Table 4). Enslaved laborers from the West Indies arrived on vessels involved in the provisions trade between Caribbean islands and New York. Typically, a few enslaved laborers, along with other diverse nonhuman cargo, arrived on any particular vessel. By contrast, enslaved Africans who arrived direct from Africa typically arrived in larger shipments that sometimes numbered in the hundreds. The history researchers (Medford, Carrington, et al. 2009:41) argue that, during the eighteenth century, limited exposure to European lifeways and the diverse origins of enslaved Africans brought to New York directly from Africa conditioned their responses to both European slavery and to each other.

During the eighteenth century, commerce in New York, Boston, and Philadelphia "all depended on the West Indian trade" (Medford, Brown, Carrington, et al. 2009a:44). To the West Indies, the British exported staves, lumber, shingles, hoops, bread, corn, beef, pork, oats, soap, and candles (Medford, Brown, Carrington, et al. 2009a:46, Table 4). New York merchants accepted small parcels of enslaved laborers as partial payment for provisions supplied to planters in the West Indies. Between 1701 and 1765, around three-quarters of enslaved Africans brought to New York were shipped from the West Indies. Shipments of enslaved Africans from the West Indies were also much more frequent than those direct from Africa (Medford, Brown, Carrington, et al. 2009a:43) (Table 5).

As such, many enslaved Africans in New York had ethnic backgrounds and experiences that were similar to those of enslaved Africans in the West Indies. Captives on particular West Indian islands also shared similar backgrounds owing to the regularization of trade and the forcible migration of captives from a limited number of sources. Between 1658 and 1713, almost "four-fifths of the slaves arriving in Barbados, the principal market for slaves in this period, and three-quarters of those coming to Jamaica, the second most important British market, came from adjacent African regions of the Gold and Slave Coasts and the Bight of Biafra" (Eltis 2000:245). Similarly, between 1658 and 1713, most enslaved Africans in the British colonies of Nevis and Antigua were from the Gold Coast, Slave Coast, or Bight of Biafra. Enslaved Africans from West Central Africa, in the region of Angola, represented 10 percent of enslaved Africans in Barbados and 20 percent of enslaved Africans in Jamaica. In Montserrat, Senegambians constituted almost 22 percent, and Southeast Africans, almost 20 percent of enslaved Africans. In the Chesapeake, most enslaved Africans were either from the Bight of Biafra (44.0 percent), Senegambia (34.2 percent), or the Gold Coast (16.5 percent) (Eltis 2000:245, Table 9.1). Of the major British colonies—Chesapeake, Barbados, Jamaica, Antigua, Montserrat, and Nevis—Chesapeake and Montserrat were the only colonies where Senegambians formed a large percentage of the enslaved population between 1658 and 1713. In New York, data for voyages disembarking in New York during the eighteenth century also suggest a predominance of Senegambians (Medford, Brown, Carrington 2009a:48–49).

When enslaved laborers from unspecified areas of Africa are removed (n = 4,032, or 76.3 percent), most enslaved Africans officially imported into New York were from Senegambia (53.5 percent), Southeast Africa (19.2 percent), the Gold Coast (15.7 percent), or West Central Africa (11.7 percent). The distribution of African regional origins for New York during the eighteenth century is similar, but not identical to, the pattern for Montserrat during the late-seventeenth and early-eighteenth centuries (Eltis et al. 1999).

Enslaved laborers arrived in Dutch New Amsterdam and later in British New York according to multiple pathways. Some enslaved laborers were directly acquired from ports along the coasts of West and West Central Africa (and to a lesser extent, Southeast Africa and Madagascar), some were brought from the West Indies, some were captured from Spanish and other European-affiliated privateers, and some arrived in New York through regional trade or movement between North American colonies. Sources for

Table 4. Caribbean Islands from Which Enslaved Persons Were Imported into New York, 1727–1765

Year	Antigua	Barbados	Bermuda	Curacao	Jamaica	Hispaniola	Montserrat	Nevis	St. Kitts	St. Eustatius	St. Thomas
1727	9	16	6	9	157	—	—	—	—	15	20
1728	9	12	4	1	86	—	2	—	—	—	—
1729	93	40	8	7	31	—	—	—	1	—	9
1730	50	22	5	11	42	7	—	—	32	—	8
1731	48	44	—	1	47	—	4	3	6	1	7
1732	13	24	2	9	75	1	2	5	—	1	6
1733	16	2	3	—	131	—	—	—	—	—	2
1734	2	8	2	6	25	—	—	5	1	—	1
1735–1736	—	—	1	12	115	—	—	—	1	—	4
1737	9	—	—	16	30	—	3	—	22	—	1
1738–1739	24	3	12	—	88	—	—	—	3	—	16
1740	12	2	3	4	22	—	—	—	11	—	2
1741	7	—	1	2	37	—	—	—	—	—	1
1742–1743	4	—	1	—	5	—	—	—	2	—	—
1748–1750	4	—	—	—	9	—	—	—	—	—	—
1754	—	—	—	—	—	—	—	—	—	—	—
1763	4	5	—	—	—	—	—	—	—	—	—
1764–1765	30[a]	5[a]	—	—	—	—	—	—	—	—	—

Note: Donnan 1969:3:462–511. The table does not include individuals from the following places or combination of places: Antigua and Bermuda (1), Jamaica and Bermuda (2), St. Lucia (1), St. Thomas and Jamaica (1), Jamaica and Hispaniola (1), Turks Island (1), Spanish Town and St. Thomas (18), Tortola and St. Thomas (4) (from Volume 3 [Medford, Brown, Carrington, et al. 2009a:Table 5]).

[a] These were listed as "New Negroes."

Table 5. Africans Imported into New York, 1701–1765

Year	West Indies	Africa
1701	36	—
1702	165	—
1703	16	—
1704	8	—
1705	—	25
1710	—	53
1711	—	55
1712	—	77
1714	53	—
1715	14	38
1716	16	43
1717	61	266
1718	433	70
1719	84	—
1720	66	—
1721	85	117
1722	91	—
1723	98	—
1724	52	—
1725	145	59
1726	144	—
1727	218	—
1728	114	—
1729	194	—
1730	173	—
1731	163	130
1732	138	—
1733	156	100
1734	51	—
1735–1736	134	—
1737	85	—
1738–1739	151	—
1740	56	—
1741	48	—
1742–1743	19	—
1748–1750	13	—
1754	—	65
1763	9	103
1764–1765	35	—

Note: From Donnan (1969, vol. 3) (from Volume 3 [Medford, Brown, Carrington, et al. 2009a:Table 3]).

enslaved laborers varied through time according to national policies and trading patterns, international conflicts, and local perceptions about the behavior or utility of enslaved laborers from different sources. For instance, Coromantees were highly esteemed as laborers, whereas enslaved Africans from Angola, Gambia, and the Bight of Biafra were not highly recommended among planters (Eltis 2000).

At times, so-called "seasoned" enslaved Africans from the West Indies were more highly prized by colonists in New York than "unseasoned" captives direct from Africa. "Seasoned" enslaved Africans were more familiar with European languages, required less training, and had survived the initial stresses of enslavement, including new disease environments, psychosocial trauma, and hard labor (Berlin 1998:48; see also Medford 2009:xix–xx). At some times and places, the association of "seasoned" enslaved Africans with rebellious tendencies made them undesirable. When fearsome Coromantee males were associated with revolts, enslavers focused on importing enslaved Africans they felt would be less dangerous, warlike, and rebellious, such as women, children, and "unseasoned" enslaved Africans who had not been exposed to West Indian climates of rebellion (Lydon 1978). Many enslaved laborers shipped to New York from the West Indies also were considered by planters to be too rebellious or in poor physical shape (Medford, Brown, Carrington, et al. 2009b:81, 2009c:58).

Bioarchaeological Approaches to African Origins

The researchers applied a battery of scientific techniques and approaches to identify and disentangle the diverse origins of the individuals buried in the New York African Burial Ground. These included genetic studies, craniometry, dental-morphology studies, isotopic analysis, and elemental-chemistry analysis (Goodman et al. 2009; Jackson et al. 2009). At the time this research was initiated, a number of these studies were pioneering applications of newly developed techniques in genetics and isotope analysis. As a result, many of the studies were preliminary or exploratory, designed to feed into ongoing research that has yet to be reported.

In many cases, the researchers believed that existing frames of reference were inadequate to answer the kinds of subregional and population-level questions in which they were interested. Available genetic,

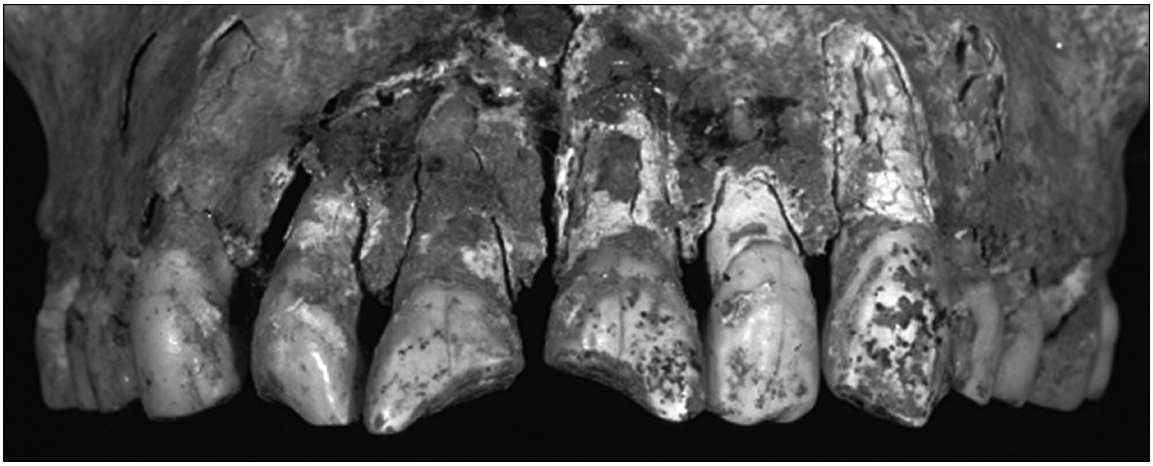


Figure 37. Example of dental modification of maxillary central incisors (from Volume 1, Part 1 [Blakey, Mack, Barrett, et al. 2009:Figure 63]).

skeletal, and isotopic frames of reference had not been established at a level of detail that allowed for the identification of subregional or macroethnic origins. To help resolve this problem, the researchers invested in the development of reference collections, databases, and collaborative research programs that promise to inform current and future bioarchaeological studies of African diasporic populations. Other life-history studies were designed to reconstruct the health status and quality of life of people buried in the New York African Burial Ground (see Chapters 5 and 6).

Research Questions

In attempting to reconstruct the origins of individuals buried in the New York African Burial Ground, the researchers posed four major research questions intended to test whether continental, subcontinental, and sex-linked variation in origins could be detected. Specifically, the researchers (Jackson et al. 2009:71–72) asked:

1. Is it possible to differentiate between continental groups (Africans, Europeans, and Native Americans as a subset of Asians) at the genetic and/or phenotypic levels?
2. In the New York African Burial Ground sample, is it possible to differentiate genetically and/or phenotypically among the ancestral Africans, ancestral Europeans, and ancestral Native Americans coming from various historically relevant geographical areas and germane ethnic groups within a specific continent?
3. Is it possible to differentiate sex-linked differences in ancestral origins and biological affinity among those interred in the New York African Burial Ground?
4. Most importantly, is it possible to differentiate among the Africans, who most likely contributed disproportionately to the ancestral backgrounds of those interred in the New York African Burial Ground, from various regions of Africa and between different macroethnic groups of Africa?

In the following sections, the methods used to answer these questions are presented along with the results of multiple studies, including studies of dental modification, elemental-signature analysis, and strontium isotope analysis. The implications of craniometry, dental morphology, genetic analyses, and evidence for lead poisoning in assessing origins are discussed.

Dental Modification

When seen in the teeth of an enslaved laborer in the Americas, dental modification is considered to be a relatively unambiguous signature of African origins (Handler 1994) (Figure 37). At various times in the past, dental modification has been practiced in many areas of the world, including Africa, "Britain, India, China, Southeast Asia, Japan, the Malay Archipelago (including the Philippines and New Guinea), Australia, Oceania, the Americas, Hawaii, Grenada, and the Virgin Islands" (Goodman et al. 2009:105, citing Milner and Larsen 1991). Dental modification was

fairly common among men and women in parts of Africa but was rare or absent in seventeenth- and eighteenth-century Americas. It was not practiced by contemporary Europeans nor does it appear to have been a feature of contemporary Native American body practices. It was, however, commonly practiced in prehistoric Mesoamerica. Therefore, dental modification is believed to have been common in historical-period New York only among forcibly migrated Africans.

Handler (1994; see also Handler et al. 1982) has hypothesized that African practices of dental modification were not performed in the Americas as a result of the tremendous cultural disruptions caused by the diaspora. Traditionally, dental modifications were performed in ritualized community contexts (e.g., puberty rituals) (Van Reenen 1964, 1986) to which enslaved Africans in the Americas no longer had access. Because many enslaved Africans had been removed not only from their communities but also from their families, widespread social disruption and the inability to perform some community-organized traditions may have prohibited the practice of dental modification in the Americas. As a result, New York African Burial Ground researchers interpret dental modification as an indication that an individual was probably born in Africa (Jackson et al. 2009).

Dental modification has been observed at other burial sites associated with enslaved African populations. Individuals from a wrecked Portuguese slaving vessel, the *Paquet Real*, which sank in 1818 off the coast of Cape Town, South Africa, also exhibited dental modification of four types which Cox and Sealy (1997:216) felt could be linked to the body practices of specific groups in Africa.

Following Gould et al. (1984), the New York African Burial Ground researchers listed 17 different types of dental modification, including deliberate extraction (Table 6). As they point out, dental modifications often are not culturally or geographically restricted and thus are not particularly reliable in identifying geographic or ethnic origins.

Of the 295 New York African Burial Ground individuals with preserved dentition, almost 9 percent (n = 26) had modified teeth. There is a great deal of variation in the specific types of dental modification and in which teeth were modified. The presence of dental modification is one line of evidence for the African birth of some African Burial Ground individuals. Morphological and locational variation in modification further testify to the diverse African cultural origins of individuals buried in the African Burial Ground. Many of the observed patterns are associated with practices in West Central Africa and have also been observed in reference populations in Cuba and Barbados (Table 7).

Some tentative conclusions can be reached regarding the affiliation of specific modification techniques with macroethnic groups or geographic areas. Observed variations correspond to those seen in Southeast Africa (Makua, Maravi, Yao), Kongo (Bakongo, Loango), Gold Coast (Asante), Angola (Owampo, Ngumbi) and Namibia (Damara), but more comparative work is necessary to more finely resolve African origins using dental-modification patterns and other lines of evidence.

Elemental-Signature Analysis and Strontium Isotope Analysis

To test the hypothesis that dental modification in the African Burial Ground sample implies African birth, Goodman et al. (2009:96) chemically tested the teeth of young individuals and individuals with culturally modified teeth. This is possible because of the characteristic patterns in which dental calcification is laid down during growth. Teeth are made of three hard tissues—enamel, dentin, and cementum. Enamel covers the exterior of tooth crowns, dentin forms layers in the interior of the crown and roots, and cementum covers tooth roots (Figure 38). Whereas enamel forms during childhood and is not replenished in later life, dentin forms mostly in childhood, and cementum is deposited annually. Incremental growth lines in enamel are seen in the Stria of Retzius. In dentin, incremental growth lines are called contour lines of Owen.

Strontium- and oxygen-isotope studies have shown that different geographic areas have unique elemental and isotopic signatures, and these signatures are fossilized in the hard tissues of teeth during calcification (Ambrose 1991; Blum et al. 2000; Ericson 1985, 1989; Larsen 1997; Price, Grupe, et al. 1994; Price, Johnson, et al. 1994; Schwarcz et al. 1991; Schwarcz and Schoeninger 1991; Sealy et al. 1991, 1995; White et al. 1998). Therefore, different areas of an individual tooth, as well as different teeth from the same individual, can be used to build a chronology indicating the places where a person lived at different times during his or her life. Patterns in tooth enamel, for instance, can be used to infer where individuals lived as infants or subadults. Change in characteristics

Table 6. African Dental Modification Patterns

A. Filing mesial maxillary central incisors (Guinea, Togo, Angola, Democratic Republic of the Congo, Uganda, Kenya and Tanzania)
B. Filing mesial and distal of maxillary central incisors (Guinea, Central African Republic, Democratic Republic of the Congo, Angola)
C. Filing six maxillary anterior teeth to pointed shape (Democratic Republic of the Congo, Zimbabwe)
D. Filing four maxillary and four mandibular incisors to pointed shape (Guinea, Cameroon, Republic of the Congo)
E. Horizontally filing maxillary central incisors (Guinea, Democratic Republic of the Congo)
F. Centrally notched incisors (Sierra Leone)
G. Serrated incisors (Mozambique)
H. Mesial triangular notch cut in gingival one-third of central incisors (Republic of the Congo, Sudan)
I. Concave filing of maxillary incisor, convex filing of mandibular incisors (Tanzania, Mozambique)
J. Extracting maxillary central incisors (Zambia)
K. Extracting mandibular central incisors (Uganda, Kenya)
L. Extracting primary mandibular canines (Democratic Republic of the Congo, Sudan, Uganda)
M. Extracting four maxillary incisors (South Africa)
N. Extracting four mandibular incisors (Sudan)
O. Extracting four maxillary and four mandibular incisors (Democratic Republic of the Congo, Uganda)
P. Extracting single lateral incisor[a] (South Africa)
Q. Artificial prognathism with facially flared maxillary central incisors (Senegal, Kenya)

Note: From Gould et al. (1984) (from Volume 1, Part 1 [Goodman et al. 2009:Table 11]).
[a] Maxillary in diagram.

of primary enamel and dentin can elucidate change during early life; cementum records annual changes. New York African Burial Ground researchers argue that "tooth chemistry may be able to resolve who grew up in the New York area, somewhere in Africa, or in a third location, such as the Caribbean" (Goodman et al. 2009:97). The researchers also suggest it may be possible to estimate the age at which enslaved Africans were forcibly migrated to New York using patterns in tooth calcification and isotope values.

The researchers tested the hypothesis that "individuals with modified teeth might chemically cluster differently than individuals who died in the first decade of life and are assumed to be New York born" using

Table 7. NYABG Modification Patterns with African and African Diaspora Reference Populations

Modification Pattern	Burial Number(s)	Referenced Population(s)	Reference(s)
Wave (incisors and canines)	47	none	none
Wedge (central incisors)	23	Cuba via Congo (Bakongo); SW Angola (Ngumbi); Cape Town via SE Africa (Makua, Maravi and Yao)	Cox and Sealy 1997; Ortiz 1929; Wentzel 1961
Mesial filing (incisors)	6, 114, 326, 366, 377	S Angola (Owampo) and N Namibia (Damara); Virgin Islands	Buxton et al. 1938; von Ihering 1882
Distal chipping/filing (incisors)	101, 241, 367, 397	Barbados	Handler et al. 1982
I^1, I^2 mesial, distal chipping/filing	68, 194, 243, 403	Grenada; Cuba via Congo (Loango)	Ortiz 1929; Stewart and Groome 1968
I^1, I^2 mesial, distal with C^1 mesial chipping/filing	115, 384	none	none
Point (incisors)	9, 106, 151, 192	Barbados; Cuba via Congo (Calabar); Gold Coast (Ashanti, Aksin)	AMNH; Ortiz 1929; Stewart 1939
Blunt point (incisors)	266, 270, 340	Southern Dem. Republic of Congo	Torday 1919
Hourglass (incisors)	281	Dem. Republic of Congo; Barbados	Handler et al. 1982; Lignitz (1919–1920)
General (occlusal) chipping/filing (incisors)	165	none	none

Key: AMNH = American Museum of Natural History; C^1 = upper canine; I^1 = upper first incisor; I^2 = upper second incisor
Note: Modified from Blakey (1998b) (from Volume 1, Part 1 [Goodman et al. 2009:Table 12]).

elemental-signature analysis (ESA) and strontium-isotope analysis (Goodman et al. 2009:105). ESA analyzes nutritionally nonessential elements incorporated into enamel. These elements are present in sediments, food, and water and enter the body through food preparation and consumption. In the body, trace elements are circulated in the bloodstream and deposited in bones and teeth. After death, taphonomic processes acting on an individual's remains may further affect the concentration of trace elements in bones and teeth (Figure 39). Distributions of different elements can be used to assess the relative geographic relatedness of individuals. Cluster analysis on five trace elements—rubidium (Rb), strontium (Sr), lanthanum (La), cerium (Ce), lead (Pb)—was applied to 40 teeth (Goodman et al. 2009). The sample included 37 teeth from New York African Burial Ground individuals, including teeth taken from 14 adults with culturally modified teeth and 19 subadults with unmodified teeth; teeth from 2 skeletons derived from excavations in coastal Ghana (DeCorse 2001a); and a pig tooth associated with Burial 137, which initially was presumed to reflect local New York values. The Ghanaian individuals were included for comparative purposes, as they were known to be of African birth (Goodman et al. 2009).

The analysis yielded four clusters of sampled teeth (Figure 40). Cluster A was represented by a single individual, Burial 165, an adult individual of undetermined sex with general chipping and filing of the teeth. The coffinless burial was assigned to the Late Group (ca. A.D. 1776–1795). Cluster C1 was mixed, containing primarily subadults without dental modification but also four individuals with modified teeth (Burials 6, 47, 101, and 106). This cluster included

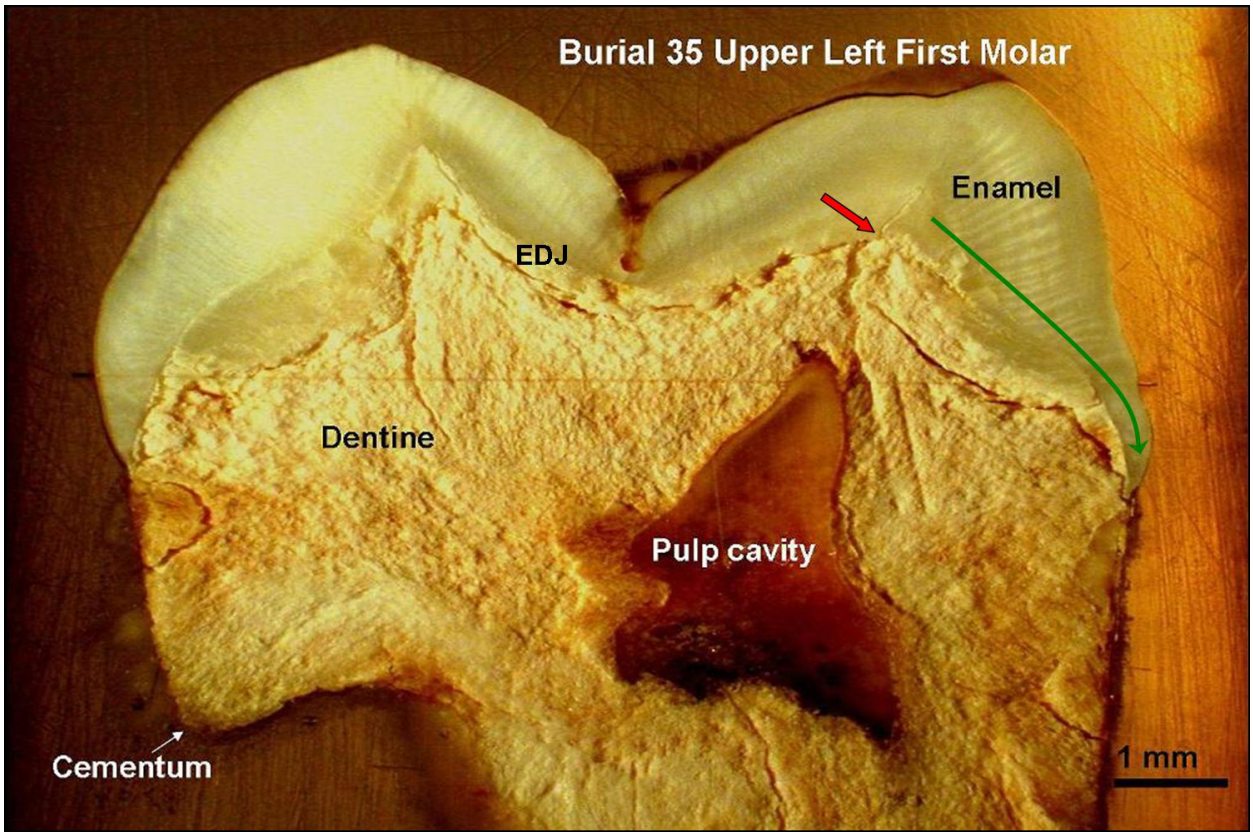


Figure 38. Longitudinal cross section of a permanent upper left first molar from Burial 35, an 8–10-year-old child. The dental tissues—enamel, dentine, and cementum—and the pulp cavity are labeled. The green arrow indicates the general orientation of crown formation. Enamel formation and calcification begin at the enamel-dentine junction (or EDJ) near the "dentine horn" (indicated by the red arrow) and continues outward and downward until the crown is complete. As a result, early forming layers are "buried" within the crown, whereas the last layers are completed at the surface, near the root (from Volume 1, Part 1 [Goodman et al. 2009:Figure 41]).

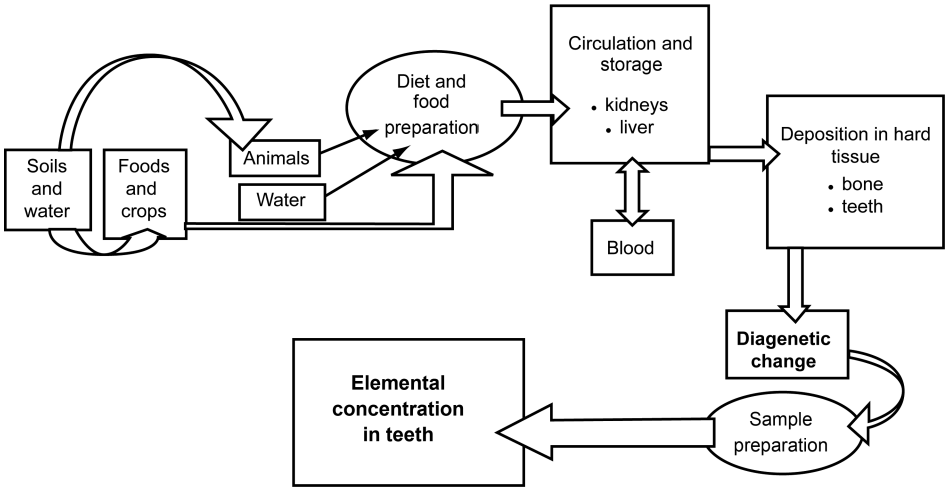
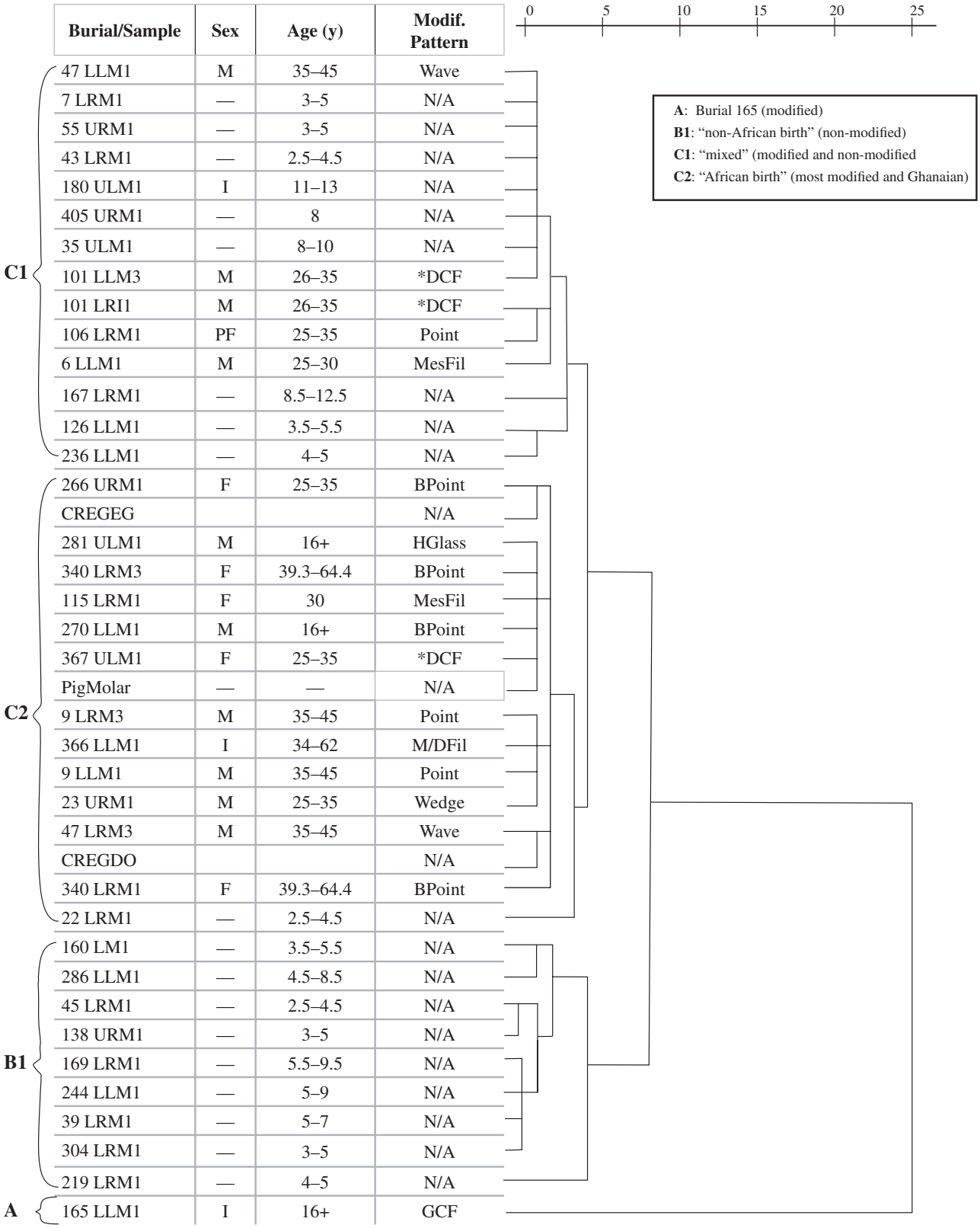


Figure 39. A model of the relationships between recorded elemental concentration and elemental uptake, deposition, diagenetic change, and sample preparation (from Volume 1, Part 1 [Goodman et al. 2009:Figure 40]).



	Burial/Sample	Sex	Age (y)	Modif. Pattern
C1	47 LLM1	M	35–45	Wave
	7 LRM1	—	3–5	N/A
	55 URM1	—	3–5	N/A
	43 LRM1	—	2.5–4.5	N/A
	180 ULM1	I	11–13	N/A
	405 URM1	—	8	N/A
	35 ULM1	—	8–10	N/A
	101 LLM3	M	26–35	*DCF
	101 LRI1	M	26–35	*DCF
	106 LRM1	PF	25–35	Point
	6 LLM1	M	25–30	MesFil
	167 LRM1	—	8.5–12.5	N/A
	126 LLM1	—	3.5–5.5	N/A
	236 LLM1	—	4–5	N/A
C2	266 URM1	F	25–35	BPoint
	CREGEG			N/A
	281 ULM1	M	16+	HGlass
	340 LRM3	F	39.3–64.4	BPoint
	115 LRM1	F	30	MesFil
	270 LLM1	M	16+	BPoint
	367 ULM1	F	25–35	*DCF
	PigMolar	—	—	N/A
	9 LRM3	M	35–45	Point
	366 LLM1	I	34–62	M/DFil
	9 LLM1	M	35–45	Point
	23 URM1	M	25–35	Wedge
	47 LRM3	M	35–45	Wave
	CREGDO			N/A
	340 LRM1	F	39.3–64.4	BPoint
	22 LRM1	—	2.5–4.5	N/A
B1	160 LM1	—	3.5–5.5	N/A
	286 LLM1	—	4.5–8.5	N/A
	45 LRM1	—	2.5–4.5	N/A
	138 URM1	—	3–5	N/A
	169 LRM1	—	5.5–9.5	N/A
	244 LLM1	—	5–9	N/A
	39 LRM1	—	5–7	N/A
	304 LRM1	—	3–5	N/A
	219 LRM1	—	4–5	N/A
A	165 LLM1	I	16+	GCF

Figure 40. ESA Cluster Diagram based on concentrations of five trace elements: Rb, Sr, La, Ce and Pb. BPoint (blunt point); DCF (distal chipping and filing); GCF (general chipping and filing); HGlass (hourglass filing); M/D Fil (mesial and distal filing); MesFil (mesial filing) (from Volume 1, Part 1 [Goodman et al. 2009:Figure 47]).

the individual in Burial 101, an adult male who was buried in a coffin with the possible Sankofa symbol tacked to the lid and whose teeth were modified with distal chipping and filing. Cluster C2 consisted of New York African Burial Ground adults, all but one with dental modification, the Ghanaian skeletons, and the pig tooth. Finally, Cluster B1 included nine individuals, all of them less than 8 years old and none of whom had dental modifications (Goodman et al. 2009).

Cluster B1 was interpreted to represent children who were born in New York, and Cluster C2 was thought to represent people who were born in Africa. Most of the individuals with modified teeth clustered together in Cluster C2, suggesting that ESA signatures correctly identified African birth. Four individuals with modified teeth, however, clustered with nine subadults in Cluster C1 who were assumed to have been born in America. In addition, Burial 165 from Cluster A had modified teeth but was nearest to Cluster B1, a cluster thought to represent locally born individuals. Finally, Burial 47 was represented by two teeth that were assigned to different clusters: the first permanent molar was assigned to Cluster C1, and the third permanent molar was assigned to Cluster C2 (Goodman et al. 2009).

The surprising clustering of the pig tooth with the presumed African-born individuals and the Ghanaian burials might indicate that the pig was transported by ship from Africa as a food source during the voyage. Alternatively, the tooth could have been brought to the Americas from Africa as a spiritually endowed object. The formation processes that led to its deposition in the fill of a New York African Burial Ground burial are unknown. There are other anomalies, such as the Burial 47 teeth representing two different clusters, the clustering of Burial 22 (a young child) with dentally modified individuals, and the clustering of Burial 101 and three other individuals with modified teeth with children lacking dental modification. Possible hypotheses for these patterns include that "a first molar may partly reflect the chemistry of the mother's environment if the mother loses bone apatite during breast-feeding" or, alternatively, that dental modification continued to be performed in colonial New York or other American contexts (Goodman et al. 2009:108, 110).

Turning to the strontium-isotope analysis, the researchers used the ratio of ^{87}Sr to ^{86}Sr as a second method to assess the birthplace of individuals. They selected a sample of 30 individuals from the New York African Burial Ground, including 11 individuals with unmodified teeth, mostly subadults, and 19 individuals with dental modification, all adults. In addition, the researchers also analyzed the 2 skeletons from Ghana, the pig tooth, and a sample of water from a Ghanaian well. The researchers proposed that local Manhattan values of $^{87}Sr/^{86}Sr$ would range between about 0.711 and 0.712, based on prior geological studies and the clustering of subadults in the analysis. The $^{87}Sr/^{86}Sr$ values for other areas where enslaved African New Yorkers had been born or had resided would likely differ from New York values, based on known variation in the distribution of $^{87}Sr/^{86}Sr$ values (Figure 41). Subadults and one adult without dental modification clustered between 0.710 and 0.714, with one exception that was a bit lower (Burial 323, the only adult in this group). The Ghanaian well water and the Ghanaian individuals had ratios between 0.715 and about 0.735, with the well water showing the highest ratio. About half of the New York African Burial Ground individuals with modified teeth had ratios that were similar to the individuals without modified teeth, and the remainder had enamel ratios well above the Manhattan range (Figure 42). For many of these individuals, however, the dentin value was considerably lower than the enamel value, suggesting migration during life (Goodman et al. 2009). The researchers hypothesize that the downward movement of dentin $^{87}Sr/^{86}Sr$ values resulted from "postmortem diagenesis, the incorporation of vital secondary dentine, or changes in primary dentin chemistry during life" (Goodman et al. 2009:115) (but see below). The pig tooth exhibited a ratio around 0.715, within the range of the modified-tooth cluster and lower than the Ghanaian samples (Goodman et al. 2009).

As Ezzo and Price (2002) have explained, dental enamel records the conditions that obtained for an individual's early life, whereas dentin is remodeled and thus records changing conditions. As African- or Caribbean-born enslaved individuals began to eat local New York foods, their active calcified tissues would begin remodeling according to the local strontium-isotope signature. These individuals lived in New York long enough for their active hard tissues to remodel. The individuals whose teeth had high enamel $^{87}Sr/^{86}Sr$ ratios but lower dentin ratios included Burials 6, 9, 106, 241, and 367; these persons may have been forcibly migrated and remained in New York for some years. By contrast, Burials 165 and 266 had similar enamel and dentin ratios that are relatively high. This pattern could suggest that these persons were not in New York long enough for their tissues to remodel before they died (Goodman et al. 2009).

An intriguing question raised by Goodman et al.'s (2009) research is: Did dental modification persist

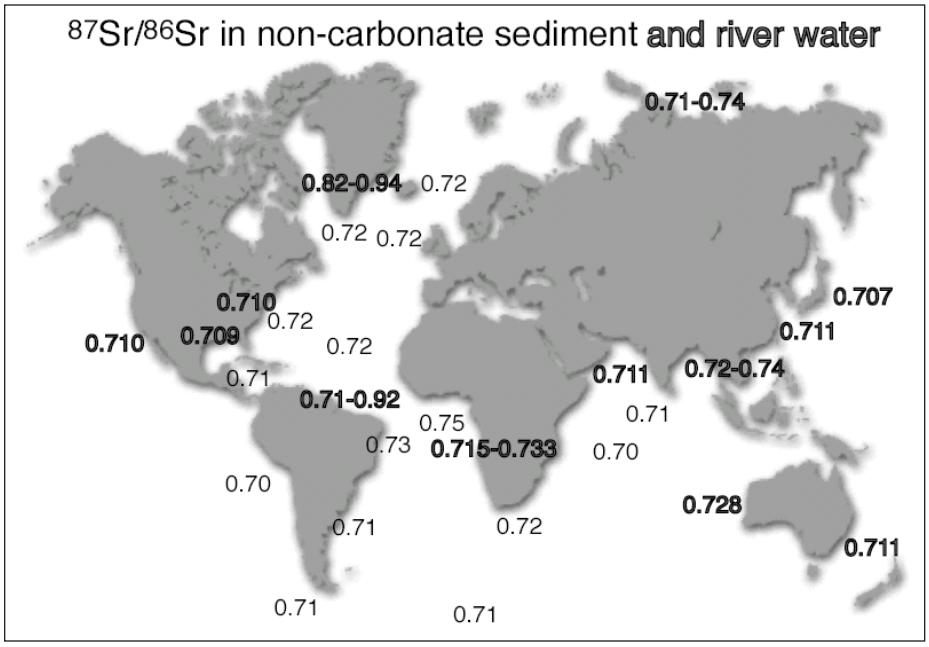


Figure 41. Broad geographic pattern of strontium isotope distribution. Data from Dasch (1969), Allegre et al. (1996), Goldstein and Jacobsen (1988), Palmer and Edmond (1992), and Huh and Edmond (1996) (from Volume 1, Part 1 [Goodman et al. 2009:Figure 45]).

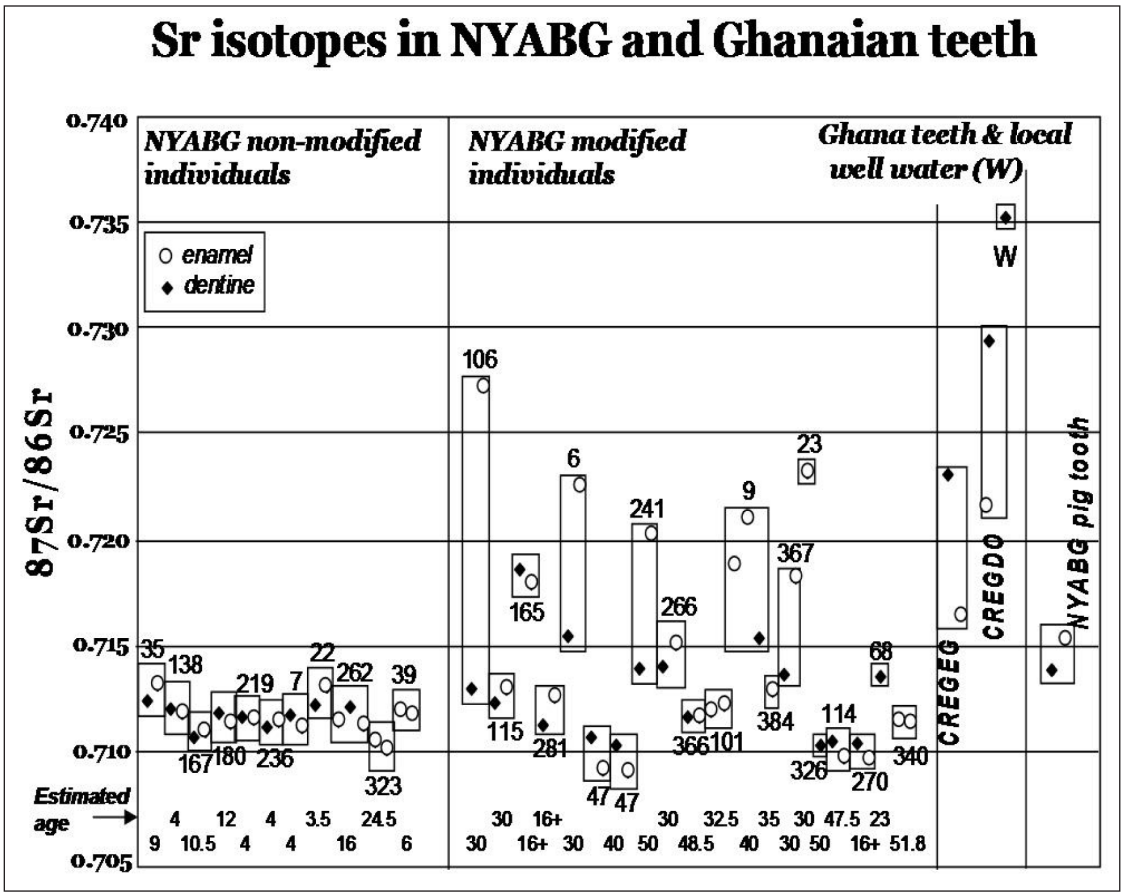


Figure 42. Strontium isotopes chart: ratio of ^{87}strontium to ^{86}strontium in samples of enamel and dentin of individuals from the New York African Burial Ground. Two individuals from Ghana, water from Ghana, and an intrusive pig molar recovered with Burial 137 are shown at right (from Volume 1, Part 1 [Goodman et al. 2009:Figure 48]).

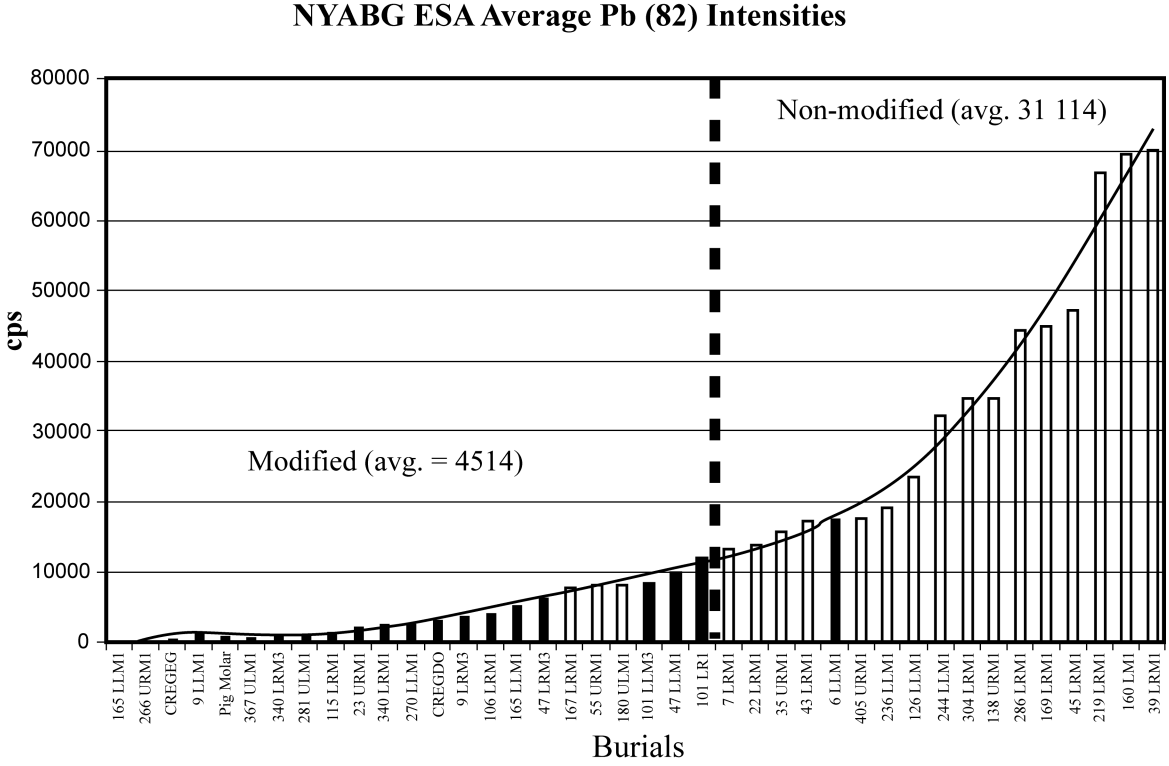


Figure 43. Lead Variation. Ranking of intensities of lead in teeth studies for ESA. Teeth from individuals with dental modifications (dark bars) tend to have low lead levels compared to individuals without dental modifications (white bars) (from Volume 1, Part 1 [Goodman et al. 2009:Figure 49]).

amongst some enslaved Africans in the Americas? Most researchers have assumed that dental modification was not practiced by enslaved Africans in the Americas (Handler 1994). The individual in Burial 101 had culturally modified teeth and was buried in a coffin with a symbol interpreted by New York African Burial Ground researchers as an Akan-Asante Sankofa symbol (Perry, Howson, and Bianco 2009). Burial 101's $^{87}Sr/^{86}Sr$ in enamel, which should indicate something about birthplace, was similar to the $^{87}Sr/^{86}Sr$ of individuals considered to have been born locally. The unexpected and apparently local $^{87}Sr/^{86}Sr$ signature in Burial 101's teeth suggests the possibility that Burial 101 was not born in Africa but was instead born locally. If so, dental modification may have persisted, albeit to a limited degree, amongst enslaved Africans in the Americas. Alternatively, Burial 101 could have been born in an area that had $^{87}Sr/^{86}Sr$ values close to those found in New York (such as in South Africa) or postmortem diagenesis possibly could have altered $^{87}Sr/^{86}Sr$ values in Burial 101's enamel (Goodman et al. 2009). Burial 101 also had saber shin, a condition possibly indicative of congenital syphilis (see Chapter 5) or yaws. Although syphilis or yaws could have been contracted in Africa, the West Indies, or New York, both diseases were rampant in the West Indies (Goodman et al. 2009).

Lead Poisoning in Colonial New York

As part of the ESA analysis, lead content was assessed. The researchers plotted the lead content of teeth and were surprised to find that it varied significantly, from near zero to toxic levels. Most individuals with culturally modified teeth exhibited levels that were lower than individuals whose teeth were not modified (Goodman et al. 2009) (Figure 43). Previously, it had been shown that high lead levels in the colonial Americas were in some contexts more common among elites than among enslaved laborers (Aufderheide et al. 1981, 1988; Corruccini, Aufderheide, et al. 1987). Differential access to and use of pewter containers with high lead content was considered a proximate cause of variation in lead poisoning.

In the New York African Burial Ground sample, however, lead levels were extraordinarily high for

subadults, suggesting that lead pollution may have been a "silent" epidemic among enslaved Africans in New York (Goodman et al. 2009:117). High levels of lead have been associated with rum consumption on sugar plantations in the New World (Corruccini, Aufderheide, et al. 1987:236–237; Handler 1994, 1996:77–79; Handler et al. 1986). Because the highest lead levels among African Burial Ground individuals were found in children, this hypothesis probably does not hold for New York. Pewter containers, serving dishes, and utensils used in New York households are one possible source of lead contamination, but further work is necessary to discover the source(s) and demographic impacts of Colonial period lead poisoning.

Craniometry

New York African Burial Ground researchers designed craniometric research sensitive to the concern that the study of cranial elements is racialized (Jackson et al. 2009:75). Today, forensic anthropologists use cranial and postcranial skeletal elements to type specimens according to race. Although useful in forensically identifying unknown individuals in the modern era, such as victims of crimes, the researchers believe that racializing craniometric methods reifies racial typologies as bounded biological entities. Many anthropologists today agree that race is a social construct, and its typological assumptions are belied by continuous multidimensional genetic and phenotypic human variation (American Anthropological Association 1998; American Association of Physical Anthropologists 1996). To this end, Blakey (2009c) makes fundamental distinctions between the assumptions, methods, and goals of forensic anthropology and biocultural research.

Analysis was restricted to cranial elements from adult individuals due to a lack of studies on subadult crania (Jackson et al. 2009). The researchers employed between 5 and 12 variables, with the number of observations made depending on the completeness of the crania. These variables were statistically compared to the craniometry of other populations, including populations from Europe; West Africa, Central Africa, South Africa, and East Africa; Native Americans; and one burial population from Guadeloupe in the French West Indies.

Craniometric data from the above populations were statistically compared to the New York African Burial Ground sample using stepwise discriminant function analysis. Individual crania were plotted in a hyperspace consisting of the same number of dimensions as variables and distances between points were calculated using the Mahalanobis metric, a scale-invariant, Euclidean-distance metric that accounts for auto-correlations in the data set.

In the analysis, African, European, and Native American crania plotted as distinct but slightly overlapping clusters (Figure 44). The New York African Burial Ground sample overlapped with the African cluster and generally confirmed African descent for the analyzed individuals. At the same time, New York African Burial Ground crania are fairly dispersed within the African-affiliated cluster, indicating phenotypic heterogeneity. In addition, four individuals plotted closer to the sample of Europeans, although still within the overlapping ranges of Africans and Europeans. Apparently, only one individual plotted within the Native American sample range.

Clearly, the morphology of studied New York African Burial Ground crania indicate diverse African origins. The researchers also compared New York African Burial Ground craniometric data to data from West, Central, and South African populations. The New York African Burial Ground crania were more often metrically similar to West Africa and Central African crania and less often similar to South African crania (Jackson et al. 2009) (Figure 45). The Guadeloupe sample crania, also representing enslaved Africans, were metrically similar to the New York African Burial Ground and African crania. The investigators concluded that the analysis can demonstrate the African origins of individuals interred at the New York African Burial Ground, but it cannot "identify the specific geographic areas narrowly, nor can it identify specific African ethnic groups" (Jackson et al. 2009:75).

A separate analysis conducted by Keita and Shujaa (in Jackson et al. 2009) analyzed 26 male crania to assess population affinities of individuals interred at the New York African Burial Ground. Using 10 standard cranial measurements, they compared New York African Burial Ground male crania to materials from Howells' worldwide cranial-series study; measurements taken by Keita on crania from Gabon, Africa; and measurements taken by Shujaa on crania from the American Museum of Natural History (AMNH). Measurements on 10 variables—maximum breadth, biauricular breadth, basibregma height, maximum length, upper facial height, nasal breadth, nasal height,

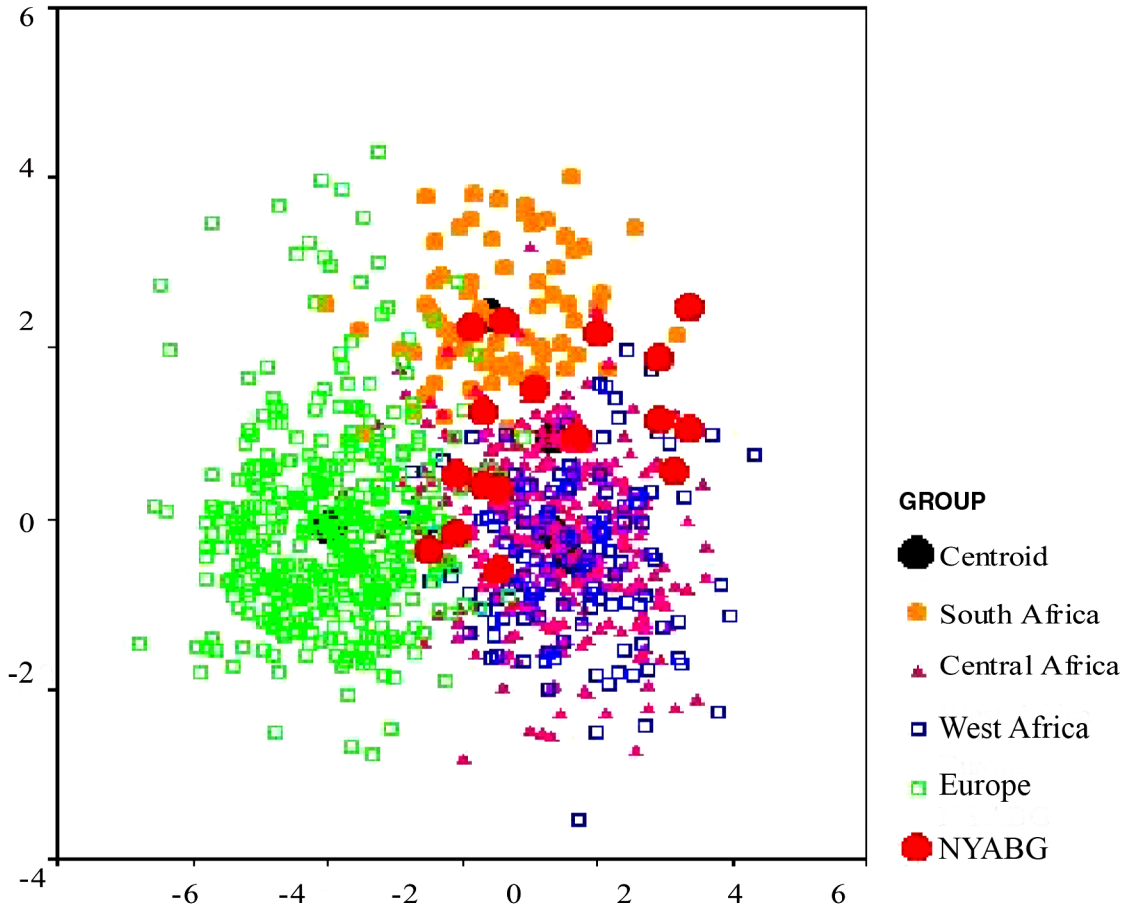


Figure 44. New York African Burial Ground skull shape analysis using Mahalanobis Distance (from Volume 1, Part 1 [Jackson et al. 2009:Figure 34]).

bizygomatic breadth, basion-prosthion length, and basion-nasion length—were statistically compared using canonical discriminant functions. To the New York African Burial Ground researchers, centroid values "place the New York crania nearest series from the Akan-speaking Ashanti (Asante) and Gold Coast series of the AMNH which form the modern nation of Ghana" (Jackson et al. 2009:77).

With the exception of some comparative data collected by the researchers, most data for African skeletal series involve the construction of racial composites from geographically and culturally diverse populations. Apparently, a similar situation pertains to European groups because the researchers had to use skeletal series from Scandinavia in place of colonial English and Dutch populations. New York African Burial Ground investigators argue that "there is a clear need to collect metric data on culturally specific, historically relevant comparative populations in order to fully examine the range of New York African Burial Ground origins" (Jackson et al. 2009:74). Further, they suggest that future research should include analysis of skeletal series exclusively "from the regions of Africa that 'contributed' most heavily in the seventeenth through eighteenth centuries to the Africans who were captured and enslaved in New York" (Jackson et al. 2009:78).

Dental Morphology

Variation in dental morphology can be used to assess the origins and affiliations of different populations. Using 23 crown and root traits, Scott and Turner (1997) compared dental morphology from different populations using hierarchical cluster analysis. Although techniques for determining the validity

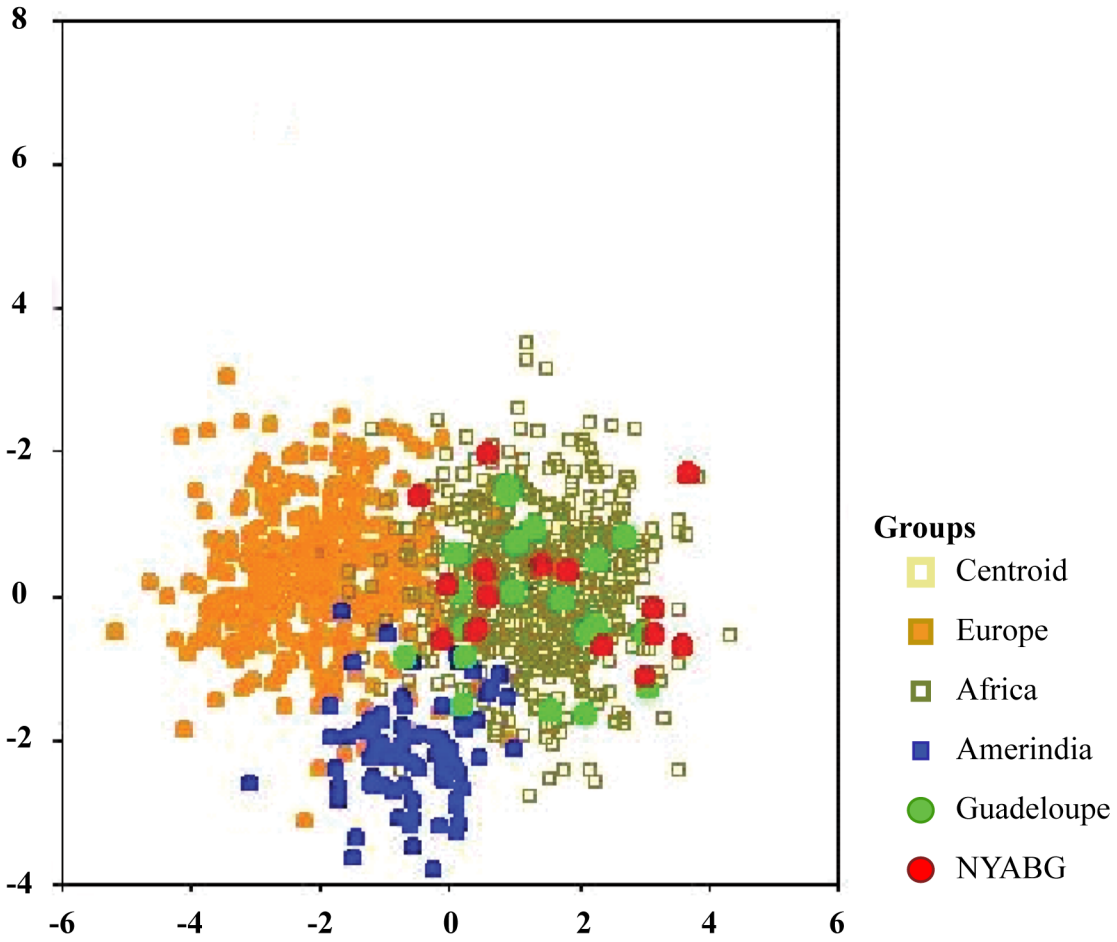


Figure 45. Scatter Plot of Craniometric Distance (from Volume 1, Part 1 [Jackson et al. 2009:Figure 35]).

of cluster solutions are not yet developed, Scott and Turner (1997) arrived at "essentially the same dendrograms no matter what combination of a standard-distance measure and clustering algorithm they employed" (Jackson et al. 2009:80). Scott and Turner's analysis revealed five distinct clusters in worldwide populations: Western Eurasia, Africa, Sunda-Pacific, Sahul-Pacific, and Sino-American. The African cluster consists of subgroups from West Africa and South Africa.

Using the same 23 traits studied by Scott and Turner (1997), the researchers compiled dental-trait frequencies for 200 New York African Burial Ground individuals and compared them to Scott and Turner's (1997) data using hierarchical cluster analysis and Euclidean distance. Interestingly, the New York African Burial Ground teeth clustered most closely with the South African teeth. Together, South African and New York African Burial Ground teeth clustered closely with teeth from Western Europe, Northern Europe, North Africa, and New Guinea. Teeth from West African and San populations did not cluster closely to the sample of New York African Burial Ground teeth (Jackson et al. 2009:Figure 37).

When the same analysis was used to compare only African and Western European populations, the New York African Burial Ground population clustered most closely to North and South Africa and then to Western Europe (Jackson et al. 2009:Figure 38). The West African and San samples distanced farther than in the previous analysis. When only African populations were compared, the New York African Burial Ground sample compared most closely to North Africa, followed closely by South Africa, and was farthest from West Africa (Jackson et al. 2009:Figure 39).

The researchers point out that Scott and Turner's (1997) geographical classification of African populations is misleading and that the South African category is composed of populations from South, East, Central, and West Africa. The investigators conclude that "the individuals from the New York African Burial Ground sample are most biologically similar to individuals in West, Central, North, and South Africa" (Jackson et al. 2009:81). Although these results are generally consistent with what is historically known about the origins of enslaved Africans in New York, the researchers repeatedly note that arbitrary lumping of diverse populations prevents the inference of affinities with specific ethnic groups or regions. The researchers also suggest that the measurement of dental traits according to grades, rather than presence or absence, would allow a "more comprehensive understanding of how to interpret patterns of trait expression" (Jackson et al. 2009:84).

Genetic Analysis

At the time the New York African Burial Ground research was initiated, many techniques in genetic analysis were still in their infancy. The extraction and amplification of archaeological DNA, for instance, was experimental and under development. Reviewers of the New York African Burial Ground research design questioned the validity and usefulness of DNA analysis. The researchers believed, however, that genetic studies were particularly apropos to tracing the origins of New York African Burial Ground individuals, and genetic studies should be pursued, if even at a rudimentary level. Principally, the researchers pursued genetic analyses to understand "the population origins and demographic structure" of the New York African Burial Ground sample (Jackson et al. 2009:85). To this end, M. George and R. A. Kittles performed a small feasibility study on ancient DNA (aDNA) from the New York African Burial Ground in 1995. The goals of the study were to (Jackson et al. 2009:85):

1. Isolate nucleic acids from bones and/or hair samples
2. Amplify specific mtDNA sequences via the [polymerase chain reaction]
3. Sequence the amplified products
4 Clone the amplified sequences for further study and provide a reservoir of these fragile sequences
5. Perform a phylogenetic analysis of the sequences to determine possible kinships and sites of origins for a small number of these individuals

New York African Burial Ground researchers extracted and isolated nucleic acids from an initial subsample of nine hair and bone samples from eight New York African Burial Ground burials. Nucleic acids could not be extracted from an additional six samples. Four samples of the nine aDNA samples were successfully amplified but were not successfully cloned and "were not subjected to phylogenetic analysis" (Jackson et al. 2009:86).

A second subsample of seven bone samples from seven burials was analyzed according to an updated methodology. The researchers concluded that "the second subsample indicated a strong West and/or Central African ancestral presence in the studied New York African Burial Ground individuals" (Jackson et al. 2009:87). Three mtDNA samples "exhibited unknown molecular variants of mtDNA," but, at the time, the background database was in "an early stage of development" (Jackson et al. 2009:87).

A third subsample of 48 bone, hair, or tissue samples was analyzed. Analysis of the third subsample was completed in 1999 and involved comparison of African Burial Ground mtDNA to a database of 1,800 mtDNA sequences from around the world. Slightly fewer than half of the database mtDNA sequences were specific to African populations (n = 849), and a majority of those were specific to West and Central African populations (n = 520). Of 48 sequenced New York African Burial Ground mtDNAs, three sequences were unknown but the other "45 evidenced mtDNA haplogroups found in West and Central African populations and their recent descendants" (Jackson et al. 2009:88).

A high level of genetic diversity was indicated by the subsample (Jackson et al. 2009:88–89; cf. Salas et al. 2005), which is common for populations of African descent (Vigilant et al. 1991; Watson et al. 1997). As of 1999, multiple studies identified "at least three mtDNA haplogroups in African populations: L1, L2, and L3" (Jackson et al. 2009:89). The researchers observed all three haplogroups in the sample, but the majority of haplotypes (69.5 percent) were identified as members of Haplogroup L2, some of whom also shared genetic affinities with modern-day Fulbe, Hausa, Mandinka, or Yoruba peoples (Table 8). The researchers report that "Haplogroup L2 is common among the Niger-Kordofanian speakers from the

Senegambia and Gold Coast regions of West Africa" (Jackson et al. 2009:89). The L2 haplogroup may represent descendants of migrant of Bantu speakers into West Africa, according to the researchers. In addition, 21.7 percent of haplotypes were members of Haplogroup L3, a haplogroup associated with East Africa but that also occurs "in appreciable frequency in West Africa, particularly among Afro-Asiatic speakers" (Jackson et al. 2009:89). The L1 haplogroup "is observed in the least sampled geographical area of Africa" and thus may be more widespread than reported.

In 2000, the Bioanthropology Research Laboratory at the University of Maryland evaluated the results of the above analyses. The laboratory identified four problem areas: (1) inadequate database of contemporary and archaic African populations, (2) high genetic diversity of African populations, (3) complex historical demography, and (4) problems in the extraction of skeletal aDNA. A number of specific directives were implemented to address these problems.

First, an International Advisory Board consisting of senior geneticists from major American universities was established. Second, regional experts who could provide specific historical or anthropological expertise were recruited to work with New York African Burial Ground scientists. Third, a National African DNA Bank was established. The bank was established under the direction of Dr. Fatimah Jackson in collaboration with scientists from the Coriell Institute for Medical Research in Camden, New Jersey, and the University of Yaounde I College of Medicine, Cameroon. As of 2004, the bank had "collected and extracted DNA samples from over 400 West and Central Africans" (Jackson et al. 2009:91). An additional 183 DNA samples were collected from University of Maryland students, faculty, and staff.

In 2002, Dr. Fatimah Jackson "began discussions with technical experts at Affimetryx Corporation to develop a DNA microarray that would provide rapid assessments of African regional markers" (Jackson et al. 2009:91). Geographical regions considered "major sources for genetic polymorphism for eighteenth-century New York" were identified and have been targeted to provide baseline data for an African Burial Ground ancestral template (Jackson et al. 2009:92). These regions include "Central Africa, Bight of Biafra, Mozambique, Senegambia, Upper Guinea, Bight of Benin, and the Gold Coast" (Jackson et al. 2009:92).

Diasporic African Identities in the New World

The New York Africans who used the African Burial Ground constructed unique, situationally complex, vibrant identities. Identity is about how people represent themselves or are represented by others. To some investigators, identity is ongoing and emergent. Identity involves "using the resources of history, language, and culture in the process of becoming rather than being" (Hall 1996:4, quoted in Leone et al. 2005:589). Identity is a complex, multifaceted, dynamic social construct. Individual identity is based on multiple intersecting and intercontingent identities that include gender, class, race, ethnicity, and religion (Stavney 1998; Wilkie 2001). Current discussions of enslaved African identities often focus on ethnic or racial identities to understand (1) where enslaved Africans came from, (2) how enslaved Africans defined themselves in relation to each other, (3) how enslaved Africans defined themselves in relation to their enslavers, or (4) how African American identities changed over time.

Definitions of identity are politically, economically, and socially motivated and historically contingent. Eltis (2000) has argued that in comparison to diasporic Africans, Europeans had fundamentally different ways of assigning identities at the subcontinental level. Europeans—whether Irish, English, Dutch, or French—saw themselves as Europeans. According to Eltis (2000:224),

> Europeans defined as insider anyone brought up as European. Africans drew the insider line around an area somewhat less than subcontinental in scope. Without such marked differences between these two self-concepts, slavery would not have been confined exclusively to Africans. Europeans thus entered the [slave trading] era with a conception of self that included some recognition of the subcontinent in which they lived as a defining entity. For Africans, no comparable perception existed and, initially, the terms Africa and Africans had meaning only to Europeans.

This is not to say that Europeans during the seventeenth and eighteenth centuries saw no essential differences between Europeans of different national or ethnic affiliations. The Irish, for instance, were reviled by the English and were often considered to be physiologically and behaviorally similar to

Table 8. Molecular Genetic Affinities of Individuals in the NYABG

Burial No.	Tissue Site Sampled	mtDNA Haplo-group	Geographical, Country, and Macroethnic Genetic Affinity
1	right radius	L2	West/Central African
6		L2	West Africa, Benin (Fulbe peoples)
7	not indicated	L3	West Africa, Niger
9	right radius	L2	West Africa, Benin (Fulbe peoples)
11	right ulna	L2	West/Central African
12	not indicated	L2	West/Central African
16	right ulna	L2	West/Central African
20	right fibula	L2	West/Central African
25	right ulna	L3	West/Central African
32		L3	West Africa, Niger
37	right fibula	L2	West/Central African
40	right fibula	L3	West Africa, Niger
47	right ulna	L2	West Africa, Benin (Fulbe peoples)
49	right fibula	L2	West/Central African
51	right fibula	L2	West/Central African
56	right radius	L3	West Africa, Niger
58	not indicated	L2	West/Central African
63	not indicated	L2	West/Central African
67	right radius	L2	West/Central African
71		L2	West/Central African
73	right radius	L2	West Africa, Nigeria (Yoruba peoples)
76	right fibula	L3	West Africa, Niger
89	right ulna	L1	West/Central African
97	right ulna	L2	West Africa, Nigeria (Fulbe peoples)
101	not indicated	L3	West Africa, Niger
105	not indicated	L1	West/Central African
107	right fibula	L2	West Africa, Nigeria (Hausa peoples)
115	right fibula	L3	West Africa, Niger
122	right ulna	L2	West Africa, Nigeria (Hausa peoples)
135	right fibula	L2	West//Central African
138	right fibula	L2	West Africa, Senegal (Mandinka peoples)
144	not indicated	L2	West/Central African
151	right ulna	L2	West/Central African
154	right fibula	L3	West Africa, Niger
158	right fibula	L2	West Africa, Senegal (Mandinka peoples)

Table 8. Molecular Genetic Affinities of Individuals in the NYABG (*cont'd.*)

Burial No.	Tissue Site Sampled	mtDNA Haplo-group	Geographical, Country, and Macroethnic Genetic Affinity
171	right ulna	L1	West/Central African
176	not indicated	L2	West/Central African
180	right radius	L2	West Africa, Senegal (Mandinka peoples)
194	not indicated	L2	West Africa, Nigeria (Fulbe peoples)
219	right fibula	L3	West Africa, Niger
226	not indicated	L2	West/Central African
242	right fibula	L2	West Africa, Nigeria (Fulbe peoples)
310	right rib	L2	West/Central African
335	right ulna	L2	West/Central African
340	not indicated	L2	West Africa, Nigeria (Fulbe peoples)

Note: From Volume 1, Part 1 (Jackson et al. 2009:Table 7).

Africans. Jewish people were likewise considered separate and were often subjected to restrictions that were not imposed on other Europeans (Eltis 2000). Such was also the case in colonial New York (Dodson et al. 2000; Rothschild 1990). Eltis (2000) has argued that without the European distinction between Europeans and Africans, the association of Africans in the Americas with enslavement would have been less clear, and the racialized contexts of slavery in the Americas may not have developed in the same manner (cf. Hall 2005). Archaeological evidence from the New York African Burial Ground, however, may counter aspects of Eltis's (2000) argument. To Perry, Howson, and Bianco (2009:373), the interment of artifacts directly from Africa or symbolic of Africa suggests that "people were declaring to one another that their people were African."

Past discussions of the identity of enslaved Africans tended to focus on how African identities were constructed by European others. They also tended to search for a monolithic and singular African American identity. Such discussions focus mainly on the ways in which outsiders (Europeans) ascribed identity to insiders (Africans) rather than to the ways that Africans constructed their own identities within the context of forced migration and slavery (Eltis 2000). As Medford, Brown, Carrington, et al. (2009e:69) point out,

> Slavery . . . altered the characteristics of African culture. Separation from the homeland and the demands and restrictions imposed on their new lives required that enslaved Africans create traditions shaped by their new reality. The steady stream of imports into the West Indian islands . . . served to renew the African heritage of those long removed from their homelands or those born in the Americas. Hence, Africans in diaspora enjoyed certain cultural continuities that contributed to their sense of self. Through religion, language, dance, song, folklore, relationship to their elders, and burial, they fashioned an existence for themselves that circumvented their bondage.

In colonial New York, enslaved laborers had multiple intersecting identities that manifested in different ways depending on context. Enslaved laborers had the class identity of "slave" status, a virtually indelible status that only under rare and special circumstances could be upgraded or removed. Depending on special skills or the kinds of tasks they performed, enslaved laborers might have also had professional identities such as barber, baker, cooper, goldsmith, sailor, or porter. They had a racial identity (i.e., Negro or black) that was based on their complexion or their purported biological heritage. Most often, enslaved Africans (and even some non-Africans) were classified as "Negro" but could also sometimes be considered "Mulatto" or ascribed some other more nuanced racial distinction (Foote 2004:196). Enslaved Africans also had diasporic ethnic or meta-ethnic identities corresponding to their cultural, geographical, and linguistic backgrounds. They were women and men, girls and boys, parents and children, mothers and fathers, brothers and sisters. Enslaved Africans also

embraced different religions and were Christian, Muslim, practitioners of traditional African religions, or practitioners of hybridized diasporic belief systems (see Chapter 8). Many enslaved West Central Africans had some exposure to Catholicism in Africa owing to the long-standing presence of Portuguese factors in their homelands and might have identified themselves as Catholic (Thornton 1984, 2001). Enslaved laborers also had identities that served the community; they were conjurers, priests, doctors, diviners, dancers, storytellers, musicians, or leaders. In short, enslaved laborers filled many religious and secular roles that informed and mediated how they formed their own complex identities (Hodges 1999; Hodges and Brown 1994; Medford, ed. 2009).

Nations and Group Identity

Early assessments of the transatlantic trade in enslaved Africans assumed that complex processes of enslavement in West and West Central Africa, the concentration of enslaved Africans from diverse areas at coastal ports, shipborne trade, and disembarkation at multiple ports in the Americas resulted in the rapid and random mixing of enslaved Africans of diverse backgrounds and the complete disruption of the ability of enslaved Africans to regularly interact and affiliate themselves with enslaved Africans of similar backgrounds. This model of culture change resulted in many conclusions about acculturation and identity formation that suggested African-derived identities were rapidly lost in the New World as enslaved Africans were acculturated to European-derived cultural norms and practices. The random mixing hypothesized by earlier scholars, however, does not appear to have occurred. More recent reassessments of the transatlantic trade in enslaved Africans indicate that "the distribution of Africans in the New World was no more random than the distribution of Europeans" (Eltis 2001:34). Most colonies tended to import a low diversity of enslaved Africans early in the process, and people from new or different areas tended to arrive in sequence rather than at the same time. Moreover, enslaved Africans from certain areas were often specially designated to specific markets, such as the Spanish American market. As such, Eltis (2001:35) has surmised that "the African migrant populations in the Americas were no more mixed than peoples of European descent in the Americas."

In some cases, enslaved Africans were repeatedly exported from the same areas of Africa and imported to a limited number of locations in the Americas. Eltis (2000:248) has noted, for instance, that "for the 556 voyages to the British Americas for which specified embarkation points have survived, an astonishing 86 percent sailed from only 6 ports." Almost a quarter of those were from Ouidah, and the others were from Gambia River, Old Calabar, Offrah, New Calabar, and the Cape Coast Castle (Eltis 2000:Table 9.2). In essence, two-thirds of enslaved Africans who arrived in Barbados or Jamaica came by way of points along a 200-mile stretch of coast between Cape Coast Castle and Ouidah (Eltis 2000).

This clustering of locales where enslaved Africans embarked in Africa and disembarked in the Americas (Eltis 2000, 2001; Hall 2005) resulted in the aggregation of enslaved Africans with similar ethnic backgrounds and facilitated the construction of neo-African ethnic identities. Enslaved Africans recognized similarities and distinctions in the backgrounds of other enslaved Africans and formulated their alliances and identities accordingly. The history researchers (Medford, Brown, Carrington, et al. 2009e:70) stress that despite the diversity of

> the beliefs and practices of those societies from which New York Africans arrived . . . upon arrival in the colonial city, they drew upon these traditions to forge bonds with each other as well as to cope with the myriad troubles attending their enslavement. Social networks forged between the native and African born, and a sense of shared circumstances fostered cultural continuities and identity in the black community.

In many colonies, including New York, enslaved Africans with a wide variety of cultural and linguistic backgrounds were, to some degree, mingled indiscriminately through processes of enslavement and labor exploitation. Many enslavers deliberately mixed enslaved laborers of different origins to "hinder attempts at rebellion" (Thornton 1992:195). Nonetheless, Africans affiliated themselves with other Africans of similar origins whenever possible. In New York, enslaved Africans often had the ability to travel widely throughout the city, a situation that enabled enslaved Africans to interact regularly with other Africans with similar cultural backgrounds, even if they did not live or work together.

Throughout the Americas, including plantation estates and urban areas like New York, enslaved Africans were frequently observed to affiliate themselves with ethnolinguistically defined "nations." Broadly defined, "nations" were an important layer of identity

formation for enslaved and free Africans (and their descendants) in the Americas (Chambers 2000, 2001; Hall 2005). The evidence for the formation of nations is substantial:

> Sources include slave-traders' accounts and planters' papers, official colonial and ecclesiastical records, fugitive slave advertisements and ex-slave narratives, collective memories embedded in slave-derived institutions such as secret societies/brotherhoods and folk religions, and vernacular performance (songs, dances, orature), as well as numerous contemporary reports and investigations (especially of slave conspiracies and revolts, and of 'tribal' backgrounds) [Chambers 2001:33–34 n. 1].

Such conditions resulted in "the dominance of a single ethnic group" in many situations and facilitated interaction and identity formation for ethnically similar peoples (Posnansky 1999:25). In New York, Coromantees were prominent, but other group identities formed as well. Rather than considering them a rapidly homogenized and acculturated group, archaeologists and historians have begun to view enslaved Africans through the lens of ethnicity and increasingly attempt to link behaviors and material correlates for behavior to specific macroethnic or meta-ethnic groups in Africa. Because diasporic nations did not correspond to African polities, Chambers (2001:27, 33) has expressed a preference for the terms "emergent 'ethnies' or nascent ethnic-groups" over "countries" or "nations." Chambers (2001:33) likens these ethnies to "common traditions [constructed] out of loosely shared ancestral ones; the ethnicity of these neo-African named groups, therefore, were 'invented traditions,' which combined the familiar with the functional."

Although a "bewildering variety" of group names were used in the African Diaspora, "most Africans in any American region identified with a more limited set of diasporic ethnonyms, and did so in a way that suggests they were ethnic groups" (Chambers 2001:26). For instance, in Jamaica, 94 percent of 1,145 advertisements for fugitive enslaved Africans (1791–1814) identified enslaved Africans according to only one of nine nations: "Mandingo, Coromantee, Chamba, Papa, Nago, Eboe, Moko, Mungola, Congo" (Chambers 2001:37 n. 27). Moreover, only two or three diasporic ethnonyms were associated with any particular region of embarkation, and these ethnonyms "remained remarkably stable over time" (Chambers 2001:26). Rather than African survivals or European stereotypes, nations were likely similar to language communities or *koinés*, diasporic creolisms (Chambers 2001). The most famous of these groups were the Coromantee (Akan) from the Gold Coast region (Chambers 2000; Thornton 1998).

In essence, enslaved Africans forcibly migrated to the Americas arrived with definite identities and rich cultural backgrounds; they knew who they were, how they did things, and with whom they were affiliated, even if others did not. Africans recognized similarity and difference in other enslaved Africans, and they felt comfort and affinity with Africans who shared an ethnic or meta-ethnic heritage and a common language. Necessarily, enslaved Africans constructed new or revised identities in the New World, identities that accommodated the conditions of enslavement to their own individual backgrounds and experience. The history researchers (Medford, Brown, Carrington, et al. 2009e:74) observe that these new identities drew on African heritage and tradition:

> Marginalized by a society that defined them as property, Africans and people of African descent created a world in which they found respite from the drudgery of labor as they pursued their own social and cultural interests. Despite numerous laws that attempted to restrict their behavior, enslaved people enjoyed a variety of secular cultural expressions within the environment of New York City. . . . These daily cultural expressions revealed the strength of the continued reliance of New York Africans on an African heritage. Music and dance had been central in the lives of Africans in the societies from which black New Yorkers were plucked, as it accompanied rites associated with birth, initiation, marriage, healing, war, and even death.

African diasporic nations sang and danced together, shared food, stories, and memories and, in some cases, reconstituted religious, mercantile, or military organizations from their homelands. In different places and at different times in the New World, enslaved Africans reconstituted themselves as diasporic Igbo, "Coromantee (Akan), Nago or Lucumí (Yoruba), Congo or Angola (western Bantu), Arada or Popo ('Gbe'), and so forth" (Chambers 2000:57). The collective identity of enslaved Africans was thus expressed through shared "foodways, 'powerways,' dances, orature, religious practice and other aspects" of daily life (Chambers 2000:57). In frolics and large festivals in New York, such as Pinkster Day, enslaved Africans often

assembled in nations, and in large plantations, such as Remire in French Guiana, residential and marriage patterns were organized according to national affiliation (Conniff and Davis 1994). Some maroon communities also were organized according to nations (Eltis 2000). The possibility exists that individuals of reconstituted African nations also buried their dead together. Some burial arrangements in the New York African Burial Ground, such as clusters of individuals buried together, therefore might represent national affiliation.

African dance, music, and art were paramount in gatherings of enslaved and free Africans in New York City. By the eighteenth century, New York City had "the reputation as a center of African dance and music," with popular dances such as "the circle dance, double-shuffle, and breakdown" regularly performed (Stuckey 1999:164). As Hodges and Brown (1994:xxi) have observed, enslaved Africans "used every opportunity to flock to the city on the weekends and holidays where taverns, markets and dance contests alleviated the tedium of home life. New York City was the center of slave culture in the region" (Hodges and Brown 1994:xxi).

An especially important aspect of nation formation is that "nations cut across plantation boundaries and could serve to organize potentially large numbers of people" (Conniff and Davis 1994:54). Over time, nations developed formal organizations that included elected ritual royalty who presided morally and symbolically over their subjects. Nations even formed a "shadow government" in New England and other areas (Conniff and Davis 1994:57). Because nations were relatively broad ethno-linguistic configurations that did not correspond exactly to African political organizations, people who may have come from competing localities or states found common allegiances that transcended political relationships in Africa (Conniff and Davis 1994). As an organizing principle of emerging African American collective identities, the nation was a social organization that could facilitate the circulation of information, the planning of rebellions and escapes, and help resolve conflict and maintain the essential "Africanness" of enslaved African identities.

African American life in colonial New York was full of contradictions; it was also cosmopolitan. Africans and African Americans in New York were often multilingual, "speaking combinations of Dutch and English, Welsh and English, French and English, and Spanish and English" along with African tongues (Berlin 1998:59). During the seventeenth and eighteenth centuries, the ethnic origins of enslaved Africans imported to New York changed over time with shifts in the transatlantic trade in enslaved Africans. As noted by the history researchers, between 1701 and 1730, enslaved Africans from the Gold Coast and the Bight of Benin included Akan speakers, Ardra, Yoruba, Adja, Fon, Popo, and Gur (Kruger 1985). Later, between 1740 and 1750, large numbers of Igbo were imported from the Bight of Biafra. In the 1760s and 1770s, Mande were imported from the Ivory Coast (Medford, Brown, Carrington, et al. 2009a:49).

Owing to limitations on their size, many plantation estates were represented by only small numbers of nations. In rare cases, as many as 20 nations were represented in a single colony. In the urban environments of colonial New York, multiple nations were represented. As many English imports to the West Indies and the northern colonies were predominantly Coromantee (Akan) and Kongo (Angola), these nations were prominent in New York (Conniff and Davis 1994). Possible evidence for Coromantee (Akan) identity was recovered at the New York African Burial Ground, but the influence of other nations at the burial ground is also possible although not yet confirmed.

Identity in Models of Behavioral Interactions and Culture Change

In archaeology, African American identity has generally been studied according to three models of culture contact and change: acculturation, creolization, and domination and resistance (Howson 1990; Singleton 1998). According to acculturation models of culture change, identity is a fixed entity that is gained or lost through processes of assimilation or acculturation. Identity, however, is never fixed; identity is "something that is constantly renegotiated" (Thomas 2002:144). Identity is "an ongoing, dynamic process that is intimately connected to real struggles" (Thomas 2002:149). Perry and Paynter (1999:306) have identified two approaches to ethnicity in African American archaeology. First, ethnicity is considered "a primordial notion in which some cultural or inheritable essence lies at the root of social identity." Second, ethnicity is "a relational notion in which social identities form and dissolve in the context of interactions with others." The latter approach, embraced by New York African Burial Ground researchers, recognizes that "internal relations are rarely homogenous; boundaries are rarely unambiguous; identities are rarely stable

over extended periods of time" (Perry and Paynter 1999:306).

Creolization models have also been developed to explain culture change and identity formation among enslaved Africans. As an anthropological concept, creolization can in general be defined as "the process of creating and maintaining distinct cultures and societies in the Americas" (Lovejoy 2000:13). The terms "creole" and "creolization" have acquired many meanings in the literature, hence reducing the precision of these terms and increasing the diversity of perspectives on creolization.

Variation in definitions of "creole" and "creolization" reflect where investigators place the loci of culture change: who could become creole, where and under what circumstances, and how creole culture differed from donor and parallel traditions (e.g., Berlin 1998; Braithwaite 1971; Conniff and Davis 1994; Lovejoy 2000). One model of creolization posits that creolization occurred early and rapidly among enslaved Africans in the Americas. In this rendering, creolization occurred immediately upon arrival, because the diverse origins and experiences of enslaved Africans and their vigorous mixing in American settings disrupted historical and cultural continuities and prevented the retention of shared behaviors (Mintz and Price 1992).

Other renderings of creolization envision the preservation and reformulation of distinctively African ethnic identities. Chambers (2000:55), for instance, has provided an African-centric form of creolization he calls "diasporic ethnogenesis, or the creation of new African-derived identities outside the continent." Chambers (2001:33) has referred to this process as "historical creolization . . . a group phenomenon enacted out of shared roles as captives and forced migrants, rather than the supposedly random and ad hoc experimentation of 'crowds' of cultural strangers" (Chambers 2001:33). Hall (2005:23) has stressed the need for "concrete and contextualized" reconstructions of enslaved African ethnic backgrounds and identity formation. To Hall (2005:23), creolization is a highly variable process grounded in historical and cultural context: "There was no single pattern of creolization either in Africa or in the Americas." Brown (2004) has suggested that cultures like the Gullah and Geechee of the Carolina Lowcountry are examples of ethnogenetic communities that commonly emerged in the Americas, despite their apparent uniqueness today. Ethnogenetic communities also could have also formed in colonial New York.

Today, many anthropologists favor models of domination and resistance when considering identity. Some investigators have attempted to modify models of domination and resistance by allowing for the possibility that some interactions among enslaved or free Africans, Europeans, and Native Americans accommodated, rather than resisted, the interests or activities of other groups. These models are referred to as resistant accommodation models (Garman 1998). Over time, the researchers began to conceive of a model that emphasizes the assertion and maintenance of human dignity. Strategies for resistance can still form a part of this new emphasis, but in this conception, identity formation is not simply the result of resistance to attempts at domination (see Chapters 1 and 7).

In the northern colonies, "most enslaved African Americans acquired cultural elements from their own heritage, from recent African and West Indian immigrants, and from the EuroAmerican farmers under whose direction they worked on a daily basis" (Garman 1998:135). According to a model of resistant accommodation, "African Americans were able to maintain elements of African and West Indian identity while taking on certain cultural aspects demanded by their Yankee masters" (Garman 1998:135–136; cf. Orser and Funari 2001). "The infusion of African-born people, especially after the mid-eighteenth century, kept traditional African beliefs fresh in the minds of the enslaved" (Medford, Brown, Carrington, et al. 2009e:73). Models of resistant accommodation suggest that enslaved African Americans maintained multiple identities that were continuously formulated through the contestation and negotiation of power (Garman 1998:136).

The dominant class (i.e., Europeans) designated enslaved laborers as "slaves" and often gave them new names upon arrival. Enslaved Africans constructed their own identities, however, within the context of their own cultural and linguistic backgrounds, life experiences, family relationships, skills, and personal preferences (Epperson 1990). Foote (1991:249), for example, has observed that enslaved African New Yorkers might have kept numerous names and layers of identity, depending on with whom they interacted. For instance, "some blacks were called by one name in the master's house and by another or several other names in the tavern, street, and market life of the blacks" (Foote 1991:249). Enslaved Africans accused of participating in the alleged conspiracy of 1741 in New York, for instance, went by traditional Akan day names such as Cuffee, Quacko, and Quashi (Davis 1971; Medford and Brown 2009c:95).

In seventeenth and eighteenth century Manhattan, variability in origins and genetic mixing—in many cases, miscegenation—produced a wide variety of complexions. Apparently, racial typologies applied in Manhattan accommodated a variety of skin tones: there could be light-skinned blacks and dark-skinned whites as well as ebony blacks and tawny blacks. Nonetheless, skin color was one of several "physical characteristic[s] used to fix racial identity and condition of servitude" (Foote 1991:254) (see Chapter 7). This was particularly true in British New York.

Singleton (2001b) has argued that status and identity of enslaved Africans cannot be adequately understood by itself. Instead, identity has to be understood in relationship to other identities. Hence, Singleton (2001b) has recommended an examination of identities of people that interacted with enslaved Africans, such as free Africans, elite Europeans, and poor Europeans. In New York, enslaved Africans and Native Americans, free Africans, indentured servants, and poor Europeans regularly interacted at work, in taverns and tippling houses, and at public gatherings during holidays and other free time. Interactions between Africans and Europeans "was made easier—particularly in the Middle Colonies—by the fact that many white men and women were also servants, the legal property of a master who could sell, trade, and discipline them at will" (Berlin 1998:59). Enslaved Africans also interacted with their enslavers, temporary employers, and officials. In all likelihood, these interactions took on a full spectrum of qualities from interactions that were jovial, light-hearted, or uplifting to those that were brutal, hostile, or demeaning. Epperson (1999a:91) has observed that events such as the 1712 uprising (Epperson calls it the "1712 Rising") in New York need to be understood in the context of enslaved African identities as well as European identities, as the "1712 Rising occurred at a critical moment in the invention of whiteness."

African Survivals in African American Archaeology

African American archaeology has, to some extent, been preoccupied with the search for African survivals, or Africanisms. In terms of artifacts, this equates with a search for "ethnic markers," a notoriously difficult and problematic task (Singleton 1999, 2006). Artifacts, features, or archaeological patterns considered to be somehow connected to an African heritage are especially sought after: "cowry shells, blue beads, Colono Ware ceramics, and house patterns, among others" (Thomas 2002:147). Archaeologists have come to associate distinctive material expressions of Africanness as the sine qua non for African American identity. Yet, as Thomas (2002:148) has asked, "does the fact that we cannot distinguish [1930s] white-occupied tenant farm sites from those occupied by African Americans mean that when that black farmer got on the bus to ride into town, he was not painfully aware of his identity—and how it determined where on the bus he was supposed to sit?"

People with distinct ethnic identities can have ethnically distinct ways of interacting with people and materials. It is often difficult, however, to equate a particular kind of object with a particular ethnicity. A more refined approach to interpreting artifacts in terms of identity views "artifacts as symbols of group identity that, rather than being static containers of ethnicity, are free to be manipulated by conscious human actors" (Orser 1999:662; Praetzellis et al. 1987). As discussed above, some aspects of cultural heritages persisted, commingled, and developed amongst enslaved laborers in the New World, despite the dislocating and dehumanizing effects of the Atlantic trade in enslaved Africans. Enslaved Africans used some of the same tools and facilities as their Euroamerican enslavers, modified existing tools to meet cultural preferences or new uses, and made some of their own tools using available materials and technological knowledge from multiple sources. Nevertheless, it is often difficult "to establish a specific cultural provenance for many African American practices" (Singleton 1999:8, 2006). Moreover, African practices reproduced in the Americas would likely have differed from African expressions, because they were embedded in American social systems that differed substantially from their African progenitors (DeCorse 1999; Singleton 1999). The New York African Burial Ground researchers share this view, noting that although some artifacts at the African Burial Ground can be affiliated with West or West Central Africa, most cannot at this time be concretely affiliated with specific places or groups (Perry, Howson, and Bianco 2009).

Thomas (2002) has argued that historical archaeologists find comfort and reassurance in discovering Africanisms at African American–affiliated sites. Perhaps this is because archaeologists who study African American–affiliated sites are often frustrated by the lack of clearly distinguishable ethnic markers (Singleton 2006). Certainly, elements and patterns

of preexisting behaviors persisted and evolved in behaviors of enslaved Africans and found new forms of expression in New World contexts, but the discovery of Africanisms as an end in itself should be avoided. In contrast to essentialist notions of culture that assume culture is definable according to fixed, immutable elements, culture can be conceptualized as a dynamic, fluid construct that is continually defined and redefined according to changing fields of social interaction (Singleton 2006). As Perry and Paynter (1999:300) have stated: "Establishing an African presence through the identification of Africanisms is hardly necessary." By itself, the search for Africanisms involves the pursuit of a "non-problem" (Perry and Paynter 1999:300), namely that African Americans were here. Instead, the discovery and interpretation of archaeological patterns associated with African cultural heritages should seek contextualized understanding of the conditions under which cultural patterns were expressed and how archaeological patterns in artifacts, features, and deposits can inform on African American life experiences (Singleton 2006).

The problem of identifying Africanisms lies in assuming that artifacts unequivocally express a fixed ethnic identity. In reality, ethnically disparate people may appear indistinct in terms of the artifact types they use and discard. It is not the artifact that signals ethnic identity. Rather, it is the context and the associations of the artifact that could correspond to ethnic identity. DeCorse (1999:144) has reported, however, that "identification and interpretation of distinct 'slave patterns' have remained unsatisfactory." A particularly vexing problem to archaeologists is that there is considerable overlap in patterns associated with enslaved Africans, overseers, and individuals who presumed to own Africans. This overlap in material culture prevents the unambiguous isolation of discretely bounded enslaved African patterns. The lack of a definitive pattern, as DeCorse (1999) has noted, should not be a surprise given the diverse origins and experiences of enslaved Africans in the Americas and the intimate material connections between the enslaved and their enslavers. The problem of identification is compounded in urban contexts because the coresidence of enslaved Africans, overseers, and holders resulted in refuse being discarded "in the same priveys, wells, or trash pits" (Singleton 1984:41, 2006). This problem is alleviated somewhat at the New York African Burial Ground, as historical evidence suggests that enslaved and free Africans buried their dead according to their own ceremonial traditions (see Chapter 8). It can be assumed with greater confidence, then, that mortuary practices at the New York African Burial Ground were predominantly those of enslaved and free Africans and not those of Europeans or Euroamericans. A reasonable working assumption is that archaeological patterns there, unlike elsewhere in the city (see Chapter 3), largely resulted from African and African American spiritual beliefs and behavioral inputs and were not mixed with those of Europeans.

Identity Formation at the African Burial Ground

This section examines how identity may have been expressed through mortuary treatment at the African Burial Ground. To the extent possible, mortuary treatment is considered according to multiple layers of identity discussed above: African identity, nations or group identities, community-level identity, social identity, occupational identity, filial identity, etc. Many of the conclusions drawn can at this time only be considered tentative, but the New York African Burial Ground research demonstrates that intriguing components of African and African American identity can be inferred from multiple lines of evidence and that further research may reveal more information on relationships between interred individuals as well as their unique and shared identities.

A surprising finding of the New York African Burial Ground research was the apparent uniformity of mortuary treatment (see Chapter 8). The researchers expected that, given a century or more of use and the continuous influx of enslaved laborers from different places and with different backgrounds, variation in mortuary practices would be observed. Although variation was observed, the researchers note that the range of variation in mortuary treatment was narrow. In a very basic sense, most individuals were treated similarly. The uniformity of mortuary treatment, in fact, led the researchers to hypothesize that African Americans in New York arrived at a general consensus on how to treat the dead. As no evidence has surfaced indicating "municipal or outsider oversight" of mortuary treatment, the uniformity in treatment seems all the more remarkable (Perry, Howson, and Bianco 2009:371). The researchers suggest the possibility that African American sextons and grave diggers could have influenced standardization of some burial practices, but African American sextons and grave

diggers do not appear in the documentary record until after the Revolutionary War (Howson, Bianco, et al. 2009). Owing to the uniformity of mortuary treatment, the researchers suggest that a "model of a proper burial was in place by the time the graves in the excavated portion of the cemetery had been interred" (Perry, Howson, and Bianco 2009:371). In support of this view, they suggest that "the cemetery provided a space where [mortuary] rituals could help to forge a developing African American identity" (Perry, Howson, and Bianco 2009:371).

Overall, there were few significant differences in mortuary treatment among men, women, and children or across time. With few exceptions, individuals buried in the New York African Burial Ground were buried individually in coffins in supine extended position with the head pointed to the west. The use of shrouds also appears to have been common, given the frequent presence of shroud pins as well as the regularity of their location within burials. Men were more likely to be buried with buttons and cuff links and women and children with pins, but this difference appears to relate to basic differences in how men's, women's, and children's clothes were fastened. Some adults, particularly men, were buried without coffins. The researchers attribute this condition to social and demographic disruptions related to the Revolutionary War, including the influx of large numbers of adult males into the city. Children were almost always buried in coffins, even when sharing a grave with an adult. The researchers hypothesize that children's coffins may have often been made by mourners rather than craftsmen and were made for all child burials. Because infants and young children are typically underrepresented in bioarchaeological assemblages as a result of poor preservation, it could also be true that children buried without coffins were less likely to be preserved. There was some variation in grave markings. Some graves in the southwest corner of the site were marked with either arcs of smooth, stone cobbles or upright rectangular stone slabs placed at the head of graves. One grave in the northern part of the site (Burial 194) may have been marked by a wooden post. The researchers suspect that grave markers were used in other areas of the site but were not preserved. In essence, basic differences in mortuary treatment appear to relate to variation in preservation, clothing technology, and historical circumstances rather than deliberate variation in mortuary treatment related to layers of identity such as age, gender, diasporic ethnic affiliation, or religious affiliation.

The Use of Artifacts to Infer Identity

Some individuals were buried with items that can tentatively be used to infer something about their identities, the identities ascribed to them by mourners, or both. Such items included coral, beads, shell, rings, cuff links, knives, smoking pipes, coins, crystals, and possible conjuring bundles. Many of these artifact types have been discovered in other African diasporic contexts and may relate to aspects of identity formation that were distinctive of diasporic Africans. These kinds of items, however, were discovered in only a small percentage of burials. Perry and Woodruff (2009:349) calculate that only "twenty-five individuals, approximately 7 percent of the excavated burials, were directly associated with coins, shells, pipes, and other items." Some individuals could have been buried with important items that were not preserved, making multiple lines of evidence, such as bioarchaeological studies, all the more important to inferring aspects of individual identity.

Perry and Howson (2009:109) suggest the rarity of personal possessions in excavated burials may have resulted from poverty. The researchers note that items such as coins, knives, and pipes were more common in the northern part of the site, where coffinless burials of men were most frequent. They suggest "that burial practices in this area reflect both a shorter period of use and a response to the demographic displacement and social privation that accompanied the Revolutionary War" (Perry, Howson, and Bianco 2009:370). If this is the case, some items interred with these individuals may have been personal items possessed by the deceased at or near the time of death.

A number of burials had rings, pendants, cuff links or other jewelry buried with the deceased (Bianchi and Bianco 2009; Bianco et al. 2009). These items may have been personal effects of the deceased; others could have been bestowed upon the deceased by mourners. Given their rareness, personal adornments probably held special meaning for the deceased and for their social relations as well. Personal adornments were likely multivalent in how they expressed different aspects of individual identities. Personal adornments, for instance, could speak to the relationships between people who shared or exchanged adornments, draw symbolic or material connections to real or fictive origins, provide protection from malevolent forces, or express information about the status of the deceased. After the Revolutionary War, many African Americans in New York placed great

importance on dressing exceptionally well and on co-opting and subverting material symbols of social status (see Chapter 7). Particularly because enslavers often deprived enslaved laborers of suitable clothing and, in some cases, stripped them of adornments, the interment of adornments with the deceased could have been an act of resistance against racial oppression and a potent assertion of personal value and human dignity (Bianco et al. 2009:328–330).

In comparison to other burials, one burial (Burial 340) was particularly rich with grave goods and signs of African origins. Burial 340 was an Early Group (pre-ca. A.D. 1735) burial of a woman with modified teeth who was between 39 and 64 years old. ESA, low lead levels, strontium-isotope analysis, and the presence of dental modification all suggest the woman in Burial 340 was probably of African birth (Goodman et al. 2009; Jackson et al. 2009). Artifacts also suggest connections to Africa. The woman was buried with an unused kaolin smoking pipe, a strand of beads and cowries around her waist, and a possible bracelet of beads on her right wrist (Perry and Howson 2009:126). As the pipe was not used, Perry and Woodruff (2009:357) suggest that the pipe "may have been included as a talisman or a memento." The strand of beads around her waist consisted of 112 glass beads, 1 amber bead, and 7 cowries. The possible bracelet of beads may have consisted of a patterned set of alternating yellow and blue-green beads, although the researchers are uncertain as to whether these beads formed part of the waist strand or a separate bracelet. The researchers suggest that the cowries could have originated in the Maldives of the Indian Ocean or near Mozambique and Zanzibar along the coast of East Africa (Bianco et al. 2009:341).

Most beads recovered from burials at the African Burial Ground, including most of those interred with Burial 340, were glass beads produced in Venice, Italy. Burial 187, a Late Group (ca. A.D. 1776–1795) burial of a child between 1.5 and 4 years of age, had a string of 22 European-made black beads encircling the hips of the child. Some beads, however, were manufactured in Africa. One Type 15 translucent red amber bead that was probably produced in Africa was discovered in Burial 340. Bianco et al. (2009:340) note that amber beads of this type were traded in Europe and Africa as well as shipped to New York (Alpern 1995:23; Breen 2004:62; Dubin 1987:101), but the New York African Burial Ground example is the only one known from an African diasporic archaeological context. Beads of West African manufacture (possibly Ghana) were associated with two burials, Burials 434 and 226 (Bianco et al. 2009:340). One opaque whitish-tan cylindrical powder-glass bead, probably produced in West Africa, was discovered in Burial 434. Only partially excavated, Burial 434 was assigned to the Middle Group, but age and sex were not determined. Eight opaque yellow oblate-to-donut-shaped powder-glass beads, also probably produced in West Africa, were discovered in Burial 226. Burial 226, an Early Group (pre-ca. A.D. 1735) burial of an infant, included a strand of the beads placed near the neck that may have been part of a necklace. Although buried in its own coffin, the infant was buried within the grave shaft of Burial 221, an Early Group (pre-ca. A.D. 1735) burial of a man between 30 and 60 years of age. Perry, Howson, and Holl (2009a:143) suggest that the two individuals may have been buried at the same time or close in time.

A variety of processes could result in the transportation of African beads to African diasporic contexts in the Americas. Recently, Handler (2006) has argued that the transportation of beads as personal possessions from Africa to the Americas was unlikely because enslavers typically deprived captives of all clothing and adornment, including beads, during the Middle Passage. Nonetheless, beads were treasured in African diasporic contexts, and different kinds, colors, and configurations of beads may have held special spiritual significance. Some, such as those around the waist of Burial 340, may have been used to signify fertility. Others, such as those around the neck of Burial 226 or around the waist of Burial 187, may have been a form of protection. The beads found in burials at the New York African Burial Ground, particularly those of African manufacture, suggest symbolic and material connections with African locales and speak to the social and spiritual identities of the deceased (see e.g., Otto 1984:75; Smith 1977:161; Stine et al. 1996).

An especially unusual and interesting artifact was interred with Burial 375, a Middle Group (ca. A.D. 1735–1760) burial of a woman between 16 and 18 years old. She was buried without a coffin in an unusual position, "with her arms crossed above her head and her legs extended" (Perry and Woodruff 2009:359). At her right hip was "a small ceramic ball (presumably a marble) with an embossed copper-alloy band wrapped twice around its circumference" (Perry and Woodruff 2009:359). It is unclear what may have accompanied the artifact, but the researchers cite possible evidence for a leather pouch. The researchers infer that the artifact may have been part of bundle containing other items.

Evidence for possible conjuration bundles was also discovered with Burials 147 and 217. Burial 147 had a cluster of approximately seven small copper rings and four pins positioned next to his right arm. These may have been part of a conjuring bundle or talisman that was hidden on his person by pinning it to his clothing underneath his right arm. The researchers note that concealing amulets on a person is a modern and historically known practice in West Africa (Perry and Woodruff 2009:360; see also Handloff 1982). Also, nineteenth-century "Asante warriors wore armbands called *kapo*, which were akin to *bansare* armbands worn in spiritual practice" (Perry and Woodruff 2009:360). Burial 217, a Late Group (ca. A.D. 1776–1795) burial of a man between 17 and 19 years old, had a peach pit deliberately buried with the man. The researchers note that peach pits are common items in conjuration bundles documented in the southern United States (Perry and Woodruff 2009:364; see also Puckett 1926:437; Ruppel et al. 2003:326). Possibly, individuals buried with evidence of conjuring bundles had in life been conjurers or diviners.

Some artifactual evidence may indicate something about an individual's occupation. Burial 6, a Late Group (ca. A.D. 1776–1795) burial, was of an adult male between 25 and 30 years old who appears to have worn a jacket with one polished and four gilt buttons. Two of the buttons were impressed with anchor designs. The researchers state that although the buttons were likely recycled from other jackets, anchor buttons were commonly used on British naval officer jackets beginning in 1774. They suggest that although probably not signaling the identity of naval officer, the "motifs may have signaled his occupation, whether as a sailor or a member of the navy, but they also may have been chosen for aesthetic or other reasons" (Bianchi and Bianco 2009:291). Many enslaved and free Africans worked in maritime industries as well as performed many occupations for the British during the Revolutionary War. The man in Burial 6, whose teeth were modified, clustered in the ESA with nine children without modified teeth and three adults with modified teeth. This man had a high enamel strontium-isotope ratio, but a substantially lower dentin value, suggesting migration during life (Goodman et al. 2009:115). The large difference between enamel and dentin strontium-isotope ratios, as well as relatively high lead levels, suggest this individual may have spent a considerable portion of his life in the Americas.

One of the most celebrated examples of an apparent Africanism at the African Burial Ground is the possible expression of the Akan Sankofa symbol on the coffin lid of Burial 101 (Figure 46). The man interred in Burial 101 had teeth culturally modified by distal chipping and filing and was between 26 and 35 years of age. The strontium-isotope signature in Burial 101's teeth overlapped unexpectedly with local New York signatures, suggesting the possibility that Burial 101 was not born in West or West Central Africa (Goodman et al. 2009:116). The ESA assigned this individual to a cluster consisting of individuals with culturally modified teeth and with unmodified teeth. Lead levels, however, were low, suggesting the individual in Burial 101 may not have lived in New York long or had foodways different from those of other New Yorkers of African descent. He was an unusual individual in terms of mortuary treatment; perhaps he had unusual origins. He could have come from southern Africa or some area of the Americas with strontium isotope signatures similar to those of New York. The Coromantee (Akan) from West Africa were especially powerful and active in the New York area. It is possible that, if Burial 101 was not from West Africa, he could have affiliated himself with the Coromantee (Akan) through kinship relations.

The heart-shaped design on Burial 101's coffin lid had been created by hammering 187 tacks into the coffin lid. Perry, Howson, and Holl (2009c:186) explain that Sankofa is an Akan or Adinkra symbol that "depicts a proverb, '*Se wo were fi na wo sankofa a yenkyi'* which can be translated as 'It is not a taboo to return and fetch it when you forget.' It reminds people of the need to '[tie] the past with the present in order to prepare for the future' (Ofori-Ansa 1995:3)."

Sankofa certainly seems a fitting symbol for diasporic Africans in New York. Denbow (1999) has noted that in the early-twentieth-century Loango Coast of West Central Africa, the heart was the seat of the soul, and heart shapes were common decoration on grave markers.

To many, the discovery of the possible Sankofa symbol represents a remarkable material and symbolic connection between the New York African Burial Ground and diasporic ethnicity. Excitement over the Sankofa symbol must be tempered by the fact that similar heart-shaped symbols, which included the initials of the deceased and the year of death, were commonly hammered into coffin lids for European burials in New York (Howson and Bianchi 2009b). Rendered in tacks, the possible Sankofa symbol on the Burial 101's coffin appears to enclose what may be initials for the deceased's name and the year of death, interpreted

Figure 46. Photograph, sketch, and schematic of the possible Sankofa symbol on the coffin lid of Burial 101 (photograph by Dennis Seckler) (from Volume 2, Part 1 *[left and lower right]* [Perry, Howson, and Holl 2009c:Figures 90 and 91]; *[upper right]* [Perry, Howson, and Bianco 2009:Figure 286]).

as "1769" (Howson and Bianchi 2009b:239). If the Sankofa symbol was being invoked with Burial 101, it may have been as a multivalent symbol that had distinct European and African interpretations and was in this sense "representative of the 'dualism' of W.E.B. DuBois (1903)" (Mack and Blakey 2004:15). The convenient correspondence in general form between European and African symbolism may have allowed diasporic ethnic groups to covertly express a collective identity without Europeans being alerted to the symbol's true meaning (Perry, Howson, and Bianco 2009:372).

Investment in coffin decoration suggests special importance for the man buried in Burial 101, as his was one of only five coffins excavated at the New York African Burial Ground with clear evidence of decoration (Howson and Bianchi 2009b:239). Historical records indicate that in comparison to enslaved Africans, Europeans and Euroamericans in New York were more frequently treated to more-expensive coffins, which could also include special fixtures and coffin decoration. Coffins provided by enslavers of deceased enslaved New Yorkers were typically of the less expen-

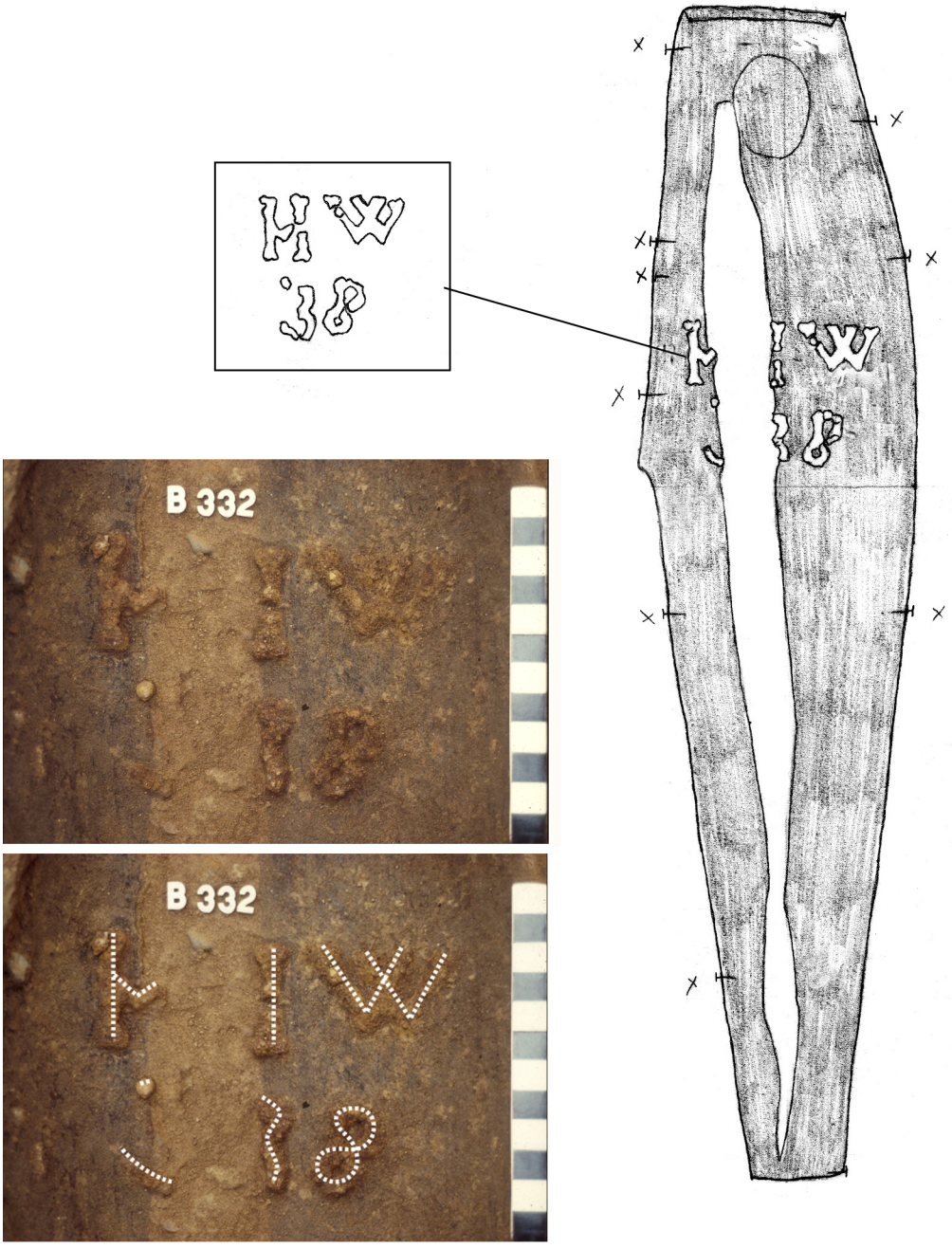


Figure 47. Photograph and sketch of the iron tack coffin decoration on the coffin lid of Burial 332 (photograph by Dennis Seckler; drawing by M. Schur) (from Volume 2, Part 1 *[left]* [Perry, Howson, and Holl 2009c:Figure 95]; *[right]* [Howson and Bianchi 2009b:Figure 128]).

sive sort (Howson and Bianchi 2009b). The coffin lid of Burial 332, a Late-Middle Group (ca. A.D. 1760–1776) burial of a man between 35 and 40 years old, was decorated with iron nails forming initials ("HW") and a number ("38"), presumably representing his age at death, or possibly, part of a date (Figure 47). The researchers interpret this coffin decoration as representing the personal identity of the deceased. Tack designs were also present on the coffin lids of Burials 222 and 176, although it is unclear whether these were purely decorative or intended to convey some symbolic meaning. Regrettably, Burial 222 was vandalized before archaeologists had a chance to record the design on the coffin. Burials 101, 176, and 332 each had a child or infant buried close by in separate burials with positions that suggest possible relationships between the deceased. These burials with decorated coffins were also all males or probable males assigned to the Late-

Middle Group (ca. A.D. 1760–1776). The Late Group (ca. A.D. 1776–1795) burial of a subadult in Burial 252 may have also made use of a decorated coffin. Further investigation is required to discern if and what relationships existed among individuals with decorated coffins and other individuals buried nearby.

Relationships between the deceased of the New York African Burial Ground could also be tentatively inferred from relationships between other burials. Possible shared graves were observed in 27 instances at the New York African Burial Ground (Table 9). Although individuals could have shared graves for a variety of reasons, such as the circumstances surrounding their deaths, some individuals who shared graves could have been related. Also, graves that were near each other could have potentially contained related individuals. Additional studies, including genetic analyses, will be required to infer how individuals were related, but it seems likely that specific family relationships and identities can be discerned by examining patterned attributes of individuals buried in shared graves and in clusters of graves. In two cases—Burials 335 and 356 and Burials 12 and 14—a mother-child relationship is plausible, as in both cases a woman was interred with a newborn or infant (Perry and Howson 2009:116). These instances of shared graves could shed light on the family roles played by Africans in New York City.

Conclusions

To date, New York African Burial Ground research has developed valuable data on the origins of the New York African Burial Ground burial population. Pilot genetic studies, ESA, and isotopic studies provide support to infer African origins of some individuals interred at the New York African Burial Ground as well as highlighted variation in life histories between individuals born in Africa and those born in the Americas. Individuals born in the Americas were more physiologically stressed and suffered enhanced levels of lead toxicity. At this time, the relationships between recorded lead levels in blood and lead levels in bone has not been established. Nonetheless, apparently high levels of lead in the bone suggest that lead was a stressor for individuals who were born or spent most of their lives in New York. Lead likely complicated physiological systems that had already been compromised by malnutrition, disease, and overwork (see Chapter 5).

Genetic research on individuals interred at the New York African Burial Ground has produced promising results. At the same time, genetic research has identified gaps in current knowledge and opened up a number of avenues for interesting future research. Genetic analyses have confirmed that continental and subcontinental population affinities can be identified through genetic studies on aDNA. The studies conducted to date have generally corroborated West African and Central African origins for New York African Burial Ground individuals, but also included East African inputs, as expected based on historical information compiled by the researchers. As reference databases grow and analytical methods are refined, the researchers are optimistic that further within-group variation can be identified.

In the course of answering research questions, many other questions have been raised. How do biological affinities relate to spatial proximity of interred individuals? Were the individuals buried close to each other also closely related? Were adults closely related to infants or children buried with them? Were the locations of interments arranged according to age, gender, biological relationships, group identity, or some combination of factors?

One problem repeatedly confronted by the researchers is the inadequacy of existing skeletal reference collections and current biochemical frames of reference. The researchers were interested in teasing apart variation between West African, European, and Native American populations to understand how different groups contributed biologically to the formation of the New York African Burial Ground sample. Where specifically in West or West Central Africa did individual Africans originate? Were individuals born in Africa, the West Indies, New York, or somewhere else? Although fairly straightforward, these are ambitious questions that require the development of gene banks for comparing DNA samples from diverse populations, greater understanding of geographical and biological variation in isotope ratios, better methods for extracting aDNA, and more precise morphological data on bones and teeth. Many previous studies have tended to lump diverse populations into geographical or racial groupings that are too coarse or arbitrary to unravel the origin stories that New York African Burial Ground researchers and descendant communities wish to learn.

The researchers caution that the precise identities of individuals buried in the New York African Burial Ground cannot be discerned. Interment records were not kept. With the exception of some possible initials, no personal identification was preserved. No maps identifying burial locations as those of specific indi-

Table 9. Shared Graves and Possible Shared Graves at the New York African Burial Ground

Burial No.	Map Location	Comments	Adult/ Child	Children	Adults
12 and 14	S 89.5, E 12	woman aged 35–45 with a newborn; the infant appeared to have been in its own coffin but within the coffin of the woman; interred at the same time; Late Group	X		
25 and 32	S 87, E 20	woman in her early 20s stacked atop a man 50–60 years old; the woman had suffered trauma and had a musket ball lodged in her rib cage; possibly interred at the same time; Middle Group			X
72, 83, and 84	S 87.5, E 34	possible shared grave; two very young children placed above a young woman 17–21 years old; burials were disturbed by a later foundation; Early Group	X	X	
79 and 90	S 82, E 5	possible shared grave with an infant placed above the foot end of a burial of a woman in her late 30s; soil intervened; the woman's coffin was hexagonal, the child's tapered; not buried at the same time; Middle Group	X		
89 and 107	S 90, E 48	possible shared grave; a woman in her 50s placed above a woman in her late 30s, both in hexagonal coffins; the top coffin was offset to the south but apparently in the same grave; possible interval between burials; the younger woman had a cylindrical red bead near her ear; Late-Middle Group			X
94 and 96	S 94, E 47	an infant centered precisely above a young man 16–18 years old; both in hexagonal coffins; possible interval between interments; these burials were part of a cluster with additional child burials; Middle Group	X		
121 and 202	S 86, E 70	a child 2.5–4.5 years old placed atop an adolescent (a probable female) 12–18 years old; both were in tapered coffins; Early Group		X	
126 and 143	S 88.5, E 80.5	two children, one 3.5–5.5 and one 6–10 years old, shared a single coffin, with the younger child placed atop the elder; the coffin was hexagonal and deep in construction; Middle Group		X	
142, 144, and 149	S 88, E 90	a woman of 25–30 years with an infant/newborn and a child of 6–12 months placed directly atop her coffin; the woman's coffin was hexagonal and the two babies' four sided; Middle Group	X	X	
146 and 145	S 73.5, E 74	an infant under 6 months old in a coffin placed atop an empty adult coffin; located along south side of posthole alignment; Late-Middle Group	X?		
159 and 161	S 73.5, E 90	an infant or young child placed adjacent to the coffin (near the foot end) of a woman 25–35 years old; the grave may also be shared with Burial 206, another infant or child grave adjacent on the opposite side; all are in coffins, the woman's hexagonal, the children's rectangular; Middle Group	X		

Table 9. Shared Graves and Possible Shared Graves at the New York African Burial Ground (*cont'd.*)

Burial No.	Map Location	Comments	Adult/ Child	Children	Adults
Burials 224, 231, and 234	S 77.5, E 97	three infants in a likely shared grave; Burial 224 was of a child between 6 and 16 months old, Burial 234 of an infant less than 6 months old, and no age can be assigned for Burial 231, but the coffin was infant-sized; all of the coffins were probably four sided, possibly tapering toward the foot; Middle Group		X	
219 and 235	S 71.5, E 123	possible shared grave; a child 4–5 years old placed above a woman aged 28–42 years, apparently in the same grave shaft but with an interval of time between interments; both in coffins; severe disturbance to the grave from construction; Late-Middle Group	X		
225 and 252	S 64.5, E 95	an infant between 6 and 15 months old placed above a child of 1–2 years; the upper coffin was offset slightly to the north; Late Group		X	
226 and 221	S 83.5, E 77	an infant of 2 months or less placed atop a man of 30–60 years, both in tapered coffins; the infant had a string of fired-glass beads at the neck; Early Group	X		
255 and 265	S 82, E 120	two infants, one less than 2 months old and one 6–12 months old, in coffins placed one atop the other in a shared grave; poor skeletal preservation; Middle Group		X	
263 and 272	S 88.5, E 74	infant burials placed one atop the other in the same grave; both were in four-sided coffins; probable Early Group based on stratigraphy		X	
268 and 286	S 75, 126 E	infant of 6 months or less, placed above a child between 4 and 8 years old; both in coffins, probably hexagonal; Middle Group		X	
293 and 291	S 82.5, E 94	an adult man (age undetermined) and child 3–5 years old may have shared a grave; the burials were disturbed by a later grave, and some skeletal remains of the adult and those of the child were displaced into the later grave shaft; Middle Group	X		
311 and 316	S 88.5, E 99	an infant 3–9 months old placed in the corner of the grave of a woman 18–20 years old; the woman's coffin was hexagonal, the infant's tapered; not buried at the same time; Late-Middle Group	X		
314 and 338	S 82, E 134	possible shared grave, with a man of 40–50 years and a woman 33–65 laying side by side, both in hexagonal coffins; Late-Middle Group			X
318 and 321	S 79.5, E 144	possible shared grave; bones of a child 7–14 years old, apparently in place, within the upper part of the grave of a child 1–2 years old; possibly isolated from other burials; Middle Group		X	
320 and 334	S 89, E 251	possible shared grave; child of 2–4 years and another young child, in immediately adjacent, aligned coffins; disturbed by construction; Middle Group		X	

Table 9. Shared Graves and Possible Shared Graves at the New York African Burial Ground (*cont'd.*)

Burial No.	Map Location	Comments	Adult/ Child	Children	Adults
326 and 374	S 75.5, E 135	an infant of 3 months or less was placed adjacent to left side of a man of 45–55 years, near the head, in the same grave shaft; they appear to have been buried at the same time; both in coffins; Middle Group	X		
335 and 356	S 84.5, E 248	a woman 25–35 years old and a newborn buried together in a hexagonal coffin; infant lay within the woman's flexed right arm; Middle Group	X		
341 and 397	S 87.5, E 229	a man of undetermined age and a woman 30–40 years old; the man's coffin had been placed atop the woman's in a shared grave; cuff links were found with the man; the woman's teeth were modified by distal chipping; Middle Group			X
393 and 405	S 84, E 211	an infant or newborn placed with a child 6–10 years old; both in narrow coffins of undetermined shape; not buried at the same time; Middle Group		X	

Note: From Volume 2, Part 1 (Perry and Howson 2009:Table 19).

viduals have been recovered. In essence, the names, family relationships, or personal backgrounds of many individuals buried in the New York African Burial Ground will never be known. Targeted studies in material culture, bioarchaeology, and history, however, can recover some information about the origins of enslaved Africans, the people with whom they were affiliated, and how they saw themselves in relation to others. In the case of colonial New York, and also in other colonies, enslaved Africans from Senegambia, Sierra Leone/Liberia, the Bight of Benin, the Gold Coast, West Central Africa, and Southeast Africa retained, reconstructed, and redirected aspects of their past African identities. These identities were not the same as African or European identities, but a new syncretic form that was based on ethnolinguistic heritages shared between some Africans but foreign to Europeans and Native Americans. Among other things, enslaved Africans shared dances, music, food, drink, conspiracies, and prayers with people they considered to be similar to themselves. They gathered and interacted in new, African-derived, ethnogenetic diasporic communities known historically as "nations." More than likely, burial parties reinforced these Afro-Atlantic identities each time a person was buried in the African Burial Ground.

Aspects of the African Burial Ground speak to multiple layers of identity. The removed location of the New York African Burial Ground suggests something about the racial, ethnic, and class statuses of individuals buried there. Enslaved and free Africans were restricted from other burial grounds and forced to bury their dead outside the city in an area that became home to noxious industries, executions, military installations, poorhouses, and prisons. Although the area was desecrated with refuse from potteries and slaughterhouses, to Africans and African Americans it was sacred ground. To Perry, Howson, and Bianco (2009), the institution of the New York African Burial Ground was important to forming the identity of the local African American community, and the apparent uniformity in basic aspects of mortuary treatment may reflect the expression of a community-level identity. This finding is particularly interesting given recent historical research on the formation of distinct diasporic identities, which in a sense could have been subsumed under an overarching and emergent African American identity. Identities associated with particular diasporic nations may have also been expressed in various ways at the New York African Burial Ground. One possible expression of a diasporic ethnic identity is the Sankofa symbol on the coffin of Burial 101, a symbol that may signify a Coromantee (Akan) identity for the deceased (Perry, Howson, and Holl 2009c:186). The possible Sankofa symbol and other evidence for special treatment may even

signify a special status for Burial 101, as it is now well known that specialized African organizations and royal hierarchies were reconstituted in diasporic contexts (Conniff and Davis 1994).

The researchers caution that, in terms of the larger burial ground, which could have included more than 15,000 burials, the New York African Burial Ground is only a small sample that may not be representative of the entire burial ground (Howson and Bianchi 2009a:73). In addition, genetic, isotope, and elemental studies have to date only been completed on small numbers of the 395 individuals available for study. It is conceivable that the African Burial Ground could have been subdivided according to various layers of identity, such as nations or religious affiliations, and that the New York African Burial Ground sample represents only a subset of one or a few of these (Perry, Howson, and Bianco 2009). Moreover, many aspects of identities may not register clearly in the archaeological record or may require intricate and subtle analyses of multiple lines of evidence to be recognized. The researchers intend to investigate these possibilities in a geographic information system using a combination of archaeological and skeletal biological dimensions, including new genetic evidence (Jackson et al. 2009).

On the other hand, some artifacts interred with individuals (as well as body practices such as specific forms of dental modification) could correspond to specific diasporic identities, which will require more information to identify and confirm. Artifacts interred with the deceased appear to indicate symbolic and, in some cases, material connections with Africa. These symbolic and material connections could have their origin in specific geographic areas of West or West Central Africa or in specific macroethnic groups, but the connections are difficult to establish archaeologically without other lines of evidence.

In a few cases, other layers of identity can be discerned. In one case, personal identification in the form of initials was registered on the coffin lid of Burial 332. An occupation in the maritime industry may be indicated by anchor motifs on buttons. Other occupational identities could possibly be inferred by examining musculoskeletal indicators of work in conjunction with other factors. Socioreligious identities, such as that of a conjurer, might be indicated by the possible interment of conjuring bundles. Family relationships can be tentatively inferred from spatial relationships between individuals and could be further investigated using genetic and other analysis. And, in a number of cases, spiritual affiliations and diasporic origins can be inferred by examining artifacts and artifact associations commonly found at African Diaspora sites. Whether these types of associations indicate "African," "New World African," or something more specific, however, requires further investigation.

Chapter 5

Diet and Disease

One of the major research goals of the African Burial Ground Project was to understand the biological and cultural effects of enslavement on the daily life of African New Yorkers. The researchers found that the individuals interred in the New York African Burial Ground were subject to myriad cultural, environmental, and biological stressors. Historical research showed that the health status of many new arrivals was already compromised by the harsh stresses of enslavement and the Middle Passage, and many already had been subjected to hard labor and poor living conditions on West Indian plantations. Enslaved laborers who arrived in New York were sick, malnourished, dehydrated, poorly clothed, exhausted, and psychologically traumatized. In short, enslaved laborers arrived in New York in a state of moderately to severely diminished health status and thus were in a difficult biological position to survive conditions in the New World. As the history researchers note,

> Whatever their condition when they left their homelands, by the time Africans arrived in the Americas, the trek to the port of embarkation and the several weeks or months of travel spent traversing the ocean virtually guaranteed poor health. Africans enslaved in the transatlantic trade suffered physically and psychologically, as they were forced to leave the familiar behind and often walked great distances overland to departing ships. Along the way, they experienced hunger and exhaustion and devastating loss (especially when loved ones, too weak to continue, were abandoned and left to die along the side of the road) [Medford, Brown, Carrington, et al. 2009b:77–78]

In New York, enslaved laborers were further subjected to difficult and inhumane working conditions, excessive physical stresses, high disease loads, poor diets, and malnutrition.

Understanding the conditions of daily life for enslaved Africans interred in the New York African Burial Ground was also a major research theme of interest to the descendant community, a theme that interdigitates with the imperative in African Diaspora studies to understand the life experiences of Africans in the diaspora. New York African Burial Ground researchers carried out multiple studies to address this theme, using bioarchaeological and historical evidence to reconstruct the daily lives of individuals interred in the burial ground. In keeping with an African diasporic perspective, the researchers paid particularly close attention to conditions in West and West-Central Africa, West Indies, and New York, as these were places where many individuals buried in the New York African Burial Ground would have spent much of their lives (see Chapter 4).

New York African Burial Ground research has contributed greatly to understanding aspects of the daily lives of enslaved Africans in New York and has raised many questions for future study. To understand the physical effects of daily life on those interred at the burial ground, the researchers studied growth and development, nutrition, disease, mechanical stress, trauma, and paleodemography. As a result, New York African Burial Ground research provides critical frames of reference against which to compare other skeletal samples of enslaved, formerly enslaved, and free populations in the Atlantic World. This chapter presents historical and bioarchaeological research on diet, disease, and environment in West and West Central Africa, the Caribbean, and New York as well as during the Middle Passage. The following chapter presents the researchers' findings on how enslavement affected the family life, labor, and demography of individuals interred in the burial ground.

Ethnographic and Historical Evidence of Diet, Disease, and Health

New York African Burial Ground research sought to achieve a better understanding of the interrelated effects of diet and disease on individuals interred in the New York African Burial Ground. This section considers historical information on how diet and disease varied during the Middle Passage, in the Caribbean, and in colonial New York and Africa. Implications for understanding environmental stressors, overall health, nutritional status, and childhood development are also discussed.

The Middle Passage

Surviving the journey from Africa to the Americas—the Middle Passage—was a psychologically and physically stressful experience for enslaved Africans. Prior to embarking, many captives were forced to walk long distances to the coast, suffering exhaustion, hunger, and the traumatic loss of loved ones along the way. At the coast, captives were kept in forts or holding facilities where they were subjected to poor ventilation and inadequate nutrition and had little opportunity for movement (Medford, Brown, Carrington, et al. 2009b:78; Medford, Carrington, et al. 2009:38). Traditional diets were replaced with insufficient provisions of dry bread or manioc (Cox and Sealy 1997:219).

The Middle Passage was a horrific and extremely stressful experience for enslaved Africans. Thornton (1992:154) has written that "the voyage was at the very best extremely unpleasant, and for many it was a slow and painful death." Conditions onboard slavers were uniformly poor but also varied with the slaver's nationality and whether the ships were royal vessels or privateers. For most of each voyage, enslaved Africans were confined to cramped and unhealthful conditions below deck. In some cases, children were free to move about the vessel while adults were chained below in agony and discomfort. French merchants allowed adults on deck daily; men, at limited times, and women, whenever they wished (Thornton 1992:154–155), but other carriers were more restrictive. To control captive Africans and prevent insurrection, men and women were often beaten with ropes, staves, broom handles, and "a tail full of Notches" (Foote 2004:68–69).

Onboard, the diet was grossly insufficient. Captives were provided a small, nutritionally insufficient diet and very little water. Limited, rationed supplies of water led to chronic dehydration among captives on many slavers and the lack of adequate nutrition made many captives weak and more susceptible to disease. Seasickness, vomiting, and diarrhea increased the risks of dehydration (Thornton 1992). Few ships carried sufficient clean water for the crew, much less for captives. Burnside (1997:134) has written, "Only recently has dehydration been understood as the underlying medical cause of the depression so often noted in the African captives." Alonso de Sandoval observed that on early-seventeenth-century slavers, "slaves were fed only once in every twenty-four hours, and then a miserly meal composed of 'no more than a medium-sized bowl of corn or millet flour or raw millet gruel'" (Thornton 1992:155–156). Around the same time, a Dutch commander noted in 1642 that enslaved Africans were given only "a little palm oil and a bit of cooked corn" (Thornton 1992:156). He blamed their high mortality rate on an inadequate diet and proposed that captives be provided larger rations of maize meal along with beans, dried fish, and elephant or hippopotamus meat. It is unknown whether his recommendations were followed by later Dutch slavers, however (Thornton 1992:156). Some vessels stockpiled yams, a traditional staple of many African peoples, in order to keep the captive Africans in relatively good health (Burnside 1997:116–117). Regardless, the dangers of malnutrition and dehydration were often extreme. On some voyages, the enslaved sickened and died when the yam supply ran out.

Dehydration and hunger led to a condition known as "fixed melancholy." Isaac Wilson, a surgeon on the ship *Elizabeth*, described the sufferers of the condition as having "lowness of spirits and despondency; refusing their proper nourishment. . . . at length the stomach gets weak, and incapable of digesting their food; fluxes and dysenteries ensue; and, from the weak and debilitated state of the patient, it soon carries him off" (Medford, Brown, Carrington, et al. 2009b:78). Captive Africans who refused to eat were punished brutally (Burnside 1997:122).

Disease and unhealthful conditions were compounded by overcrowding on slavers, where merchants packed as many enslaved Africans into the holds as possible in order to increase their profits. Captives were packed tightly, as if logs, with no room to stand or move and no space for latrine buckets (Burnside 1997:122; Medford, Carrington, et al. 2009). Not until the end of the eighteenth century were regulations adopted that governed the number of captives relative to a ship's ton-

nage. For English ships, the number was five enslaved persons to every 3 tons—"an appalling, claustrophobic vision." Captives were kept in poorly ventilated quarters in a humid and hot climate, facilitating the spread of disease, and were prone to developing sores that were susceptible to infection due to poor sanitation. Diseases such as dysentery, smallpox, typhoid, and yellow fever were carried onto the ships and were easily spread onboard. Epidemics sometimes decimated everyone on board, including enslaved Africans and crew. In other cases, epidemics were spread in the ports at which the ships called (Thornton 1992:157).

The Middle Passage was a dangerous and excruciating journey for Africans forcibly migrated to the Americas (Medford, Brown, Carrington, et al. 2009b:78). For eighteenth-century voyages to the North American colonies, a sample of 93 voyages averaged 73.94 days in length. During the same period, one of every six captives destined for the North American colonies died en route during a long and stressful voyage (Eltis et al. 1999). The history researchers note that "conditions on board ship (including quality and quantity of food and water and sanitation), the behavior of the crew, and weather had direct bearing on the survivability of the captive Africans. Estimates of the rate of mortality during this phase of the transatlantic trade range from 10 to 20 percent, depending on the time and length of the voyage" (Medford, Carrington, et al. 2009:38). Those who survived the longest voyages, such as to Cartagena and Vera Cruz, were nearly starved to death by voyage's end (Thornton 1992:159).

Slaving vessels departed the coast of West Africa in early summer and returned to New York in July or August. This schedule allowed those who survived the arduous conditions of the voyage some opportunity to become acclimated to the new environment before the onset of New York's cold winters (Foote 2004:69). A hint of the conditions of slaving ships on arrival is the oft-cited passage from a letter to Peter Stuyvesant in 1655 describing how slave ships arriving in New Amsterdam could be recognized by their "foul smell" (Thornton 1992:161). Once enslaved Africans arrived in the Americas, after months of deprivation and unhealthful living conditions, the accumulated stresses and shock of the Middle Passage were compounded by the unhealthful conditions of holding facilities. Substantial numbers of enslaved Africans died shortly after arriving in the Americas. As such, it was common practice to establish a waiting period to ensure the health of enslaved laborers and for sellers to guarantee the health of recent arrivals.

Some notion of how the Middle Passage was viewed by Africans lies in the near-universal belief among seventeenth-century Africans that the voyage was a form of witchcraft, and when they arrived, they would be made into oil and eaten. It was believed that ships' flags were dyed red with the blood of slain Africans (Thornton 1992:161). The practice of a potential buyer tasting a slave's sweat, thought to determine if he or she was ill, no doubt reinforced this fear (Burnside 1997:115).

The West Indies

As discussed in Chapter 4, many enslaved Africans were first brought to the West Indies before they were transshipped to New York. There, they suffered inadequate nutrition, hard forced labor, unsanitary conditions, brutal treatment, sexual exploitation, and the ravages of disease.

Diet in the West Indies

Foodstuffs in the West Indies came from several sources, including plantation provisions and the enslaved laborers' own gardens, but most of the enslaved person's subsistence derived from what the plantations provided (Handler and Lange 1978:89). Handler and Lange (1978:86) have noted that by the later years of the period of enslavement plantations sometimes provided a cooked noonday meal for enslaved laborers as well as an allowance of provisions, but enslaved people in the West Indies generally prepared their own meals. According to Edward Long in *History of Jamaica,* the diet of West Indian enslaved laborers was varied, including "pulse, herbs, plantains, maize, yams . . . pork and fish, fresh or salt; salted beef, herrings, jerked hog, or fowls" (quoted in Medford, Brown, Carrington, et al. 2009b:80). The bulk of the plantation's provisions consisted of maize, however. Handler and Lange (1978:87) have estimated that each adult received an average of 1.0–1.5 pints of maize per person per day; children and women that did not work in the field received less, and drivers and other privileged laborers received more.

A small portion of a plantation's acreage often was given over to the manager and the enslaved laborers as a "provision field," planted in maize, okra, yams, sweet potatoes, and pigeon peas (Handler and Lange 1978:66–67). Except for maize, foods grown in provision fields were rarely distributed (Handler and Lange 1978:87). Salt fish, usually imported cod or mackerel, was second only to maize in terms of frequency of distribution to adult enslaved laborers. Plantation

managers also distributed salt, rum, and molasses (Handler and Lange 1978:88). Fresh or salted meat was provided on special occasions. William Dickson, quoted in Handler and Lange (1978:88), wrote in 1789 that "when in health, the field-Negroes never do taste, at least they are not allowed, butchers meat, milk, butter, or any kind of fresh animal substance."

Enslaved laborers in the West Indies raised subsistence crops and occasionally cash crops, small livestock, and poultry on small house plots (Handler and Lange 1978:30). Although enslaved laborers were allowed some personal time to work their own gardens, the timing of plantation and garden work often conflicted. As a result, enslaved laborers were rarely able to use all the time allotted them for provisioning (Medford, Brown, Carrington, et al. 2009b:80). Unfortunately, the adequacy of provisions was susceptible to variation in weather, the political situation, or agricultural conditions. Hurricanes destroyed the subsistence crops as well as the cane crops, leaving little food for enslaved laborers to eat.

Legal barter and trade in stolen goods supplemented the diet of enslaved laborers in Barbados. Enslaved laborers circulated vegetables, animal fodder, firewood, and other subsistence goods in a vigorous marketing system (Handler and Lange 1978:31–32). This exchange system also provided an outlet for stolen goods, including plantation food, and cash crops such as aloes, cotton, cane, sugar, rum, and ginger. Enslaved individuals exchanged or bartered baskets, hammocks, wooden stools, pottery, rope, foodstuffs, rum, tobacco, clothing, and copper coins. Given that enslaved persons were often hungry and malnourished, it is not surprising that the theft of items that could be bartered for food was rampant. Theft was often punished by execution (Handler and Lange 1978:90).

Disease and Environment in the West Indies

Enslaved Africans brought to the West Indies entered into a new disease environment. Many enslaved Africans were exposed to colder and wetter climatic regimes than those to which they were accustomed in their homelands. Although much of the Caribbean is temperate or hot and humid, the mountainous regions of Jamaica and other islands can be cool and moist. The New York African Burial Ground researchers suggest that conditions such as "malnourishment, crowded quarters, long hours of labor, poorly constructed huts that opened to the elements and rested on damp and wet terrain, and lack of [adequate sanitation] in the compounds" made enslaved Africans especially susceptible to local diseases (Medford, Brown, Carrington, et al. 2009b:78). Damp and unsanitary conditions led to the contamination of food and water. During food shortages, consumption of immature fruits and vegetables led to sickness (Medford, Brown, Carrington, et al. 2009b:78–79).

Diseases that afflicted enslaved Africans in the West Indies included yaws, tuberculosis, leprosy, elephantiasis, amoebic and bacillary dysentery, fevers, lockjaw (trismus nascentium), and worms (Handler and Lange 1978:98). Medford, Brown, Carrington, et al. (2009b:79) observe that it was common for newly arrived Africans to be quarantined to avoid infecting the population. Children were particularly afflicted by yaws and lockjaw. Lockjaw was generally thought to be the greatest threat to newborns. Yaws was particularly dangerous to people suffering from malnutrition or other weakness. Survivors of yaws were afflicted with secondary symptoms for years to come, but Africans in historical-period times made an effort to inoculate children during outbreaks by exposing them to the disease in the belief that people exposed to yaws were less susceptible to other diseases later in life.

Hookworms, which typically entered the body through the feet, were common in the dirty, damp, and unsanitary conditions in which enslaved Africans lived and labored. In the afflicted, hookworms caused extreme hunger, lethargy, anemia, and stunted growth and development. People afflicted with hookworms sometimes resorted to geophagy to quell their body's yearning for food and nutrients (Medford, Brown, Carrington, et al. 2009b:80).

The effects of disease and diet on enslaved laborers in the West Indies were devastating and included high infant mortality, increased maternal mortality, and prenatal developmental stress. West Indies plantations provided "sick houses" for their laborers that varied greatly in their level of cleanliness. A surgeon or apothecary visited the laborers, and enslaved female laborers were assigned as nurses and midwives (Handler and Lange 1978:100). Plantation managers paid the additional expenses of providing food and medicine for sick laborers. Workers who suffered from accidents—all too common in the mills or boiling houses—or succumbed to illnesses were kept in the sick houses until they recovered or died. Mortality from disease and accidents was high. Data from Newton Plantation in Barbados indicate that the most common causes of death among enslaved laborers were consumption, dropsy, dysentery, leprosy, and

measles (Handler and Lange 1978:Table 10). African-descended "doctors" also practiced herbal medicine and no doubt combined their folk pharmacopoeia with traditional curing practices.

New York City

Prior to their forcible migration to New York City, many enslaved Africans had already suffered a host of indignities and stresses, and their health had often been compromised even before experiencing the harsh living conditions awaiting them. As previously mentioned, it was not uncommon for enslaved laborers to die shortly after arrival or to harbor diseases that went unnoticed by their buyers and sellers. The researches report that in one case in 1726, 14 of 52 enslaved Africans exported from the coast of Guinea died shortly after arriving in New York City (Medford, Brown, Carrington, et al. 2009b:81). The incidence of death was so high that in 1728, the House of Assembly waived the importation fee for enslaved laborers who died within 30 days of their arrival (Medford, Brown, Carrington, et al. 2009b:81).

Diet in New York Compared to That of West and West Central Africa

With the exception of elites' diets, it can be assumed that the diet of seventeenth- and eighteenth-century New Yorkers was poor and probably protein deficient. According to Rothschild (1990:162), "many of the foods recognized as traditionally Dutch [cabbage and *koolsla*, cookies, and *oley koeks* (doughnuts), bread and cheese (Kalm 1960; Rose 1988)] did not involve meat or, when they did . . . did not require special cuts." Janowitz (1993) studied Dutch foodways using materials from the Stadt Huys, and her conclusions echo those of Rothschild (1990). She found that the baseline diet in the New Netherlands included "bread, cheese, butter, fish, eggs, shellfish, vegetables, pancakes, and porridge. . . . while cheese and fish provided the bulk of animal protein for everyone" (Cantwell and Wall 2001:178).

The New Amsterdam settlers continued European foodways and also borrowed crops and food technology from Native Americans, cultivating maize, beans, and squash and taking advantage of abundant game, such as deer and wild birds (Janowitz 1993). Fish and shellfish, particularly oysters, were important, although the species differed from those available in Europe (Cantwell and Wall 2001:179). Cantwell and Wall (2001:180) have observed that "maize was particularly important in the colonial diet; cooks used it in many recipes as a substitute for such favorite Old World grains as wheat and barley." Maize was popular because it was grown easily and produced a high yield.

Staple dishes were maize based and included samp porridge (coarsely ground Indian corn boiled alone or with salted meat or vegetables) and suppawn, a porridge made from corn meal and milk (Cantwell and Wall 2001:180; Medford, Brown, Carrington, et al. 2009b:82). Suppawn was made the same way as wheat or barley porridge was made in Europe. Fresh foods were not common. Fresh meat was rare, and fruits and vegetables were available only seasonally.

Although Africans who had originally lived in West and West Central Africa were accustomed to a variety of diets, the diet available to them in New York City almost certainly would have been nutritionally deficient. Subsistence practices and diet in West and West Central Africa varied geographically, seasonally, and with variations in local climate and rainfall (DeCorse 2001a:104), such that generalization is difficult. Farming, livestock raising, fishing, and shellfish collection were conducted to varying degrees by different groups at different times. Coastal peoples and those living near the rivers fished to feed their families and also to trade with inland savannah dwellers who had limited access to riverine resources. Lagoon fish were dried and traded along the coast and inland (Kelly 1995:63). Shellfish constituted an important component of late Iron Age subsistence in coastal Ghana and continued to be significant during the post-European-contact period (DeCorse 2001a:105).

Most West African peoples became dependent on agriculture beginning about 4,000–5,000 years ago (Andah 1993; DeCorse 2001a:104; Williamson 1993). Within territorial boundaries, however, rainfall and temperature might vary sufficiently to make farming more productive in one region than another. During the historical period, important West African crops, not all of which were indigenous, included millet or so-called "Guinea corn" (*Pennisetum glaucum*), plantains, bananas, maize, rice (*Oryza glaberimma*), sorghum (*Sorghum bicolor* or *S. vulgare*), shea nut (*Butyrospermum parkii*), oil palm (*Elaeis guineensis*), cassava (manioc), groundnuts (peanuts), cocoa beans, and yams (*Dioscorea* spp.). Cowpeas (*Vina unguiculata*), peppers, sweet potatoes, citrus, sugar cane, hackberry, and other crops also were cultivated. DeCorse (2001a:112) has listed a wide range of imported crops that are farmed today. Few of these

foods would have been regularly available to forcibly migrated Africans in colonial New York.

In other ways, agriculturists in West and West Central Africa consumed diets that were similar to those of seventeenth- and eighteenth-century inhabitants of New York. Many diets were rich in carbohydrates, as they are today (DeCorse 2001a:104). The most common traditional foods were porridge or meal made from millet or maize flour boiled alone or with milk (Kelly 1995:222; Nwanunobi 1996:52). Common dishes in the Kongo region were *nfundi*, made from boiled corn meal, and *wandu*, a vegetable dish made with pigeon peas (Medford, Brown, Heywood, et al. 2009b:16). Meat was eaten rarely and was used sparingly in sauces (Kelly 1995:224). *Fufu*, made from pounded yams, cassava, or plantain, is a staple through much of Ghana. It is commonly served with slow-cooked stews of yams, legumes, okra, onions, and peppers (Piersen 1996:18). DeCorse (2001a:104) has noted that "among the coastal Fante, *kenkey*, a dish made from soaked and partly fermented corn, is very common." These staple carbohydrate foods were supplemented with meat, game, shellfish, and fish. Palm oil provided necessary fats and other nutrients (Piersen 1996:18). Africans also used maize and millet extensively to brew beer (Law 1991).

During the seventeenth and eighteenth centuries, the indigenous inhabitants of some parts of West Africa were agriculturists who raised yams, millet, sorghum, and oil palm and kept chickens, goats, and sheep (Kelly 1995:62, 224). This diet was supplemented with wild plants, fish, and game. Following Feinberg (1969, 1970), Mork writes that in other areas, such as seventeenth-century Elmina, people were not farmers. Rather, they subsisted mainly on fish and relied "on inland trade and supply ships to provide additional grains, such as corn and millet, and vegetables for the town" (Mork 2002:6).

Diet certainly changed over time, both within ancient African societies and as a result of contact with Europeans. Kelly (2004:225) has stated that "one of the widest ranging, and probably most significant transformations of African societies occurred with the introduction of new food crops." Introduced food crops included tomatoes, peanuts, papayas, bananas, cassava, and maize. Maize, which could be cultivated with less labor than indigenous crops, made the attainment of agricultural surpluses possible (Miracle 1966). Firsthand historical accounts from the Bight of Benin region "speak of dense populations, where virtually all of the landscape was cultivated, and where maize was already a significant crop by the beginning of the eighteenth century" (Kelly 2004:225). The existence of these settlements has prompted the question, "Were the dense settlements due to the advent of maize?" (Kelly 2004:226). Some writers (e.g., Law 1991) have suggested that maize was grown primarily to provision ships involved in the trade in enslaved Africans and discount the idea that maize rapidly replaced millet as the staple food crop. However, archaeological investigations of Savi, the capital of the Hueda kingdom (1660–1727), suggest that the period of Savi's growth and greatest extent were coincident with the adoption of maize (Kelly 2001a). In southern Togo, agricultural terraces originally constructed for yam cultivation were abandoned when maize was adopted (Kelly 1999, 2001b; Kuevi 1989). The degree to which groups living in the interior were affected by the adoption of maize, however, is unclear. Individuals from the interior who were forcibly migrated to the Americas as enslaved laborers may not have had the maize-dependent diets that came to characterize people living in some areas along the Atlantic coast.

As mentioned above, maize, along with several other foods, was also an important staple food in colonial New York, but specific historical information on New York African diets is sparse. Enslaved African diets were probably similar, but less adequate, than those provided the poor. In 1736, New York's poorhouse residents were provided "bread and beer, milk porridge, or beef broth and bread for breakfast; pork and peas porridge or fish and peas porridge for dinner; and bread and cheese, 'sappaan' and milk, or beef broth and bread for supper" (Medford, Brown, Carrington, et al. 2009b:82). In the late-eighteenth century, John Jea, an enslaved African imported directly from Africa, was fed "Indian corn pounded or bruised and boiled with water . . . and about a quart of sour buttermilk poured on it; for one person two quarts of this mixture, and about three ounces of dark bread, per day, the bread was darker than that usually allowed to convicts, and greased over with very indifferent hog's lard" (Medford, Brown, Carrington, et al. 2009b:82). Occasionally, Jea was supplied a half pound of beef and a half gallon of potatoes that were intended to last a week (Medford, Brown, Carrington, et al. 2009b:82). In all likelihood, enslaved laborers supplemented their diet whenever possible by growing their own food in small plots, hunting, fishing, collecting wild foods, stealing from homes or markets, and trading in a vigorous underground market. It is known that fish and oysters were important foods for New Yorkers of all classes (Yamin

2000), and enslaved men may have at times been able to hunt, fish, and collect shellfish, given their relative mobility. Game, fish, and shellfish would have been particularly important sources of protein, vitamins, and minerals that were otherwise missing from the diet.

A vigorous underground economy helped to mitigate the effects of a limited diet. Medford, Brown, Carrington, et al. (2009c:63) note that enslaved persons sold or bartered independently grown crops and livestock, wild foods (oysters and fish being particularly prominent), and crafts. Laws passed to prohibit such activity indicate the extent to which it was practiced. In 1684, 1702, and 1715, laws were passed precluding enslaved persons from selling commodities. Shortly after the 1741 conspiracy, the council passed yet another law. It stated in part:

> [O]f Late Years great Numbers of Negros Indians and Molatto Slaves have Made it a common Practice of Buying, Selling and Exposing to Sale, not Only in houses, out houses yards but Likewise in the Publick Streets Within this City, great Quantities of Boiled Indian Corn, Pears, Peaches, Apples and other kind of fruit which pernicious practice is not only Detrimental to the Masters Mistresses and Owners of Such Slaves in Regard they Absent themselves from their Service: But is also productive of Encreasing if not Occasioning many and Dangerous fevours and other distempers & Diseases in the Inhabitants in the same city [New York City Common Council 1905:4:497–498, quoted in Medford, Brown, Carrington, et al. 2009c:63].

Prohibiting the sale of produce and foodstuffs not only precluded the enslaved Africans from developing independent economic activities but also blocked important sources of supplemental nutrition (Medford, Brown, Carrington, et al. 2009c:63).

Disease and Environment in New York

According to Cantwell and Wall (2001:170), the households in New Amsterdam and early New York could be very complex. "Living together under the same roof might be a householder and his family members, whom were usually of European descent; employees who worked in the family's business, who might also be of European descent; and enslaved people, some of whom were Indians but most of whom were of African descent." Living together in such cramped conditions, enslaved laborers typically were assigned to the less desirable spaces of New York dwellings—cellars, kitchens, attics, and lofts. Enslaved women, who often resided as servants in New York households, spent many of their days working in the so-called "Negro kitchen," a detached building where food was cooked over a wood fire in large pots. Africans often resided in or near this building (Medford, Brown, Carrington, et al. 2009b:82; see also Wilson 1994:64–65).

In most cases, living conditions for enslaved laborers were cramped, damp, dark, and drafty. Enslaved Africans were more susceptible to the cold than their European factors and were not always provided with adequate clothing. Some enslavers provided suitable clothing for enslaved laborers, but others did not, forcing enslaved laborers to suffer New York's cold, snowy winters unless they pilfered clothing or cloth to protect themselves from the elements (Medford, Brown, Carrington, et al. 2009b:81–82).

Unsanitary urban living conditions, contaminated food and water, and close quarters led to frequent outbreaks of disease (Medford, Brown, Carrington, et al. 2009b:83). Epidemics of unidentified fevers, perhaps typhoid or malaria, raged in New York in 1668 and again in 1669 (Goodfriend 1992:280). Smallpox, yellow fever, and measles epidemics occurred repeatedly throughout the eighteenth century, particularly in the 1740s and 1750s. A yellow fever epidemic broke out in 1702 on the heels of an outbreak of smallpox. It was so sweeping that residents who were able left the city for country outposts in New Jersey and Long Island (Goodfriend 1992:133). An estimated 570 people, or about 10 percent of the city's population, died in this epidemic (Goodfriend 1992:134). Measles broke out in 1729, and another smallpox epidemic in 1731 killed more than 500 of the city's 7,045 European residents, or at least 7 percent of the population (Goodfriend 1992:134). Smallpox devastated the population again in 1756 (Foote 2004:69). Diphtheria and influenza were also common (Medford, Brown, Carrington, et al. 2009b:83), and the very young and the elderly were more likely to succumb to such epidemics (Goodfriend 1992:28). The fact that many individuals interred at the New York African Burial Ground were young children or infants could be partially explained by the frequent outbreak of disease.

Factors that Compromised the Health of the New York African Burial Ground Population

A number of factors, including genetic characteristics, heavy alcohol consumption, and lead poisoning, could have further complicated the effects of poor diets and

heavy disease loads. The genetic characteristics of some African-descended peoples could have compounded the nutritional inadequacies of New York diets. These included lactose intolerance, which has been estimated to be as high as 75 percent and would have contributed to calcium and protein deficiency. Vitamin D deficiency may have been induced by deeply pigmented skin (Kiple and King 1981; Kiple and Kiple 1977; Nesby-O'Dell et al. 2002; Sutch 1976). Alcohol was frequently consumed by enslaved and free workers in New York, who were in the habit of imbibing as much as a half pint of liquor before eight o'clock in the morning. Alcohol was consumed throughout the workday as well as in the evenings at dramshops, taverns, and tippling houses. Work-related alcohol consumption was so open and pervasive that expenses for work crews often included provisions of liquor (Medford, Brown, Carrington, et al. 2009b:84). Although alcohol could have sometimes protected enslaved laborers against bacterial infection as well as supplied a fortifying effect against the harsh conditions of daily life, rampant consumption of alcohol could have also complicated the health status of enslaved laborers in myriad ways.

Another major health concern for enslaved laborers was lead consumption. Food and liquor consumed in New York City were often contaminated with lead. Lead-containing pewter tools and containers were used in production of liquor and in the preparation and storage of food (Handler et al. 1986; Medford, Brown, Carrington, et al. 2009b:83). Lead poisoning can result from a single dose of lead, but most often, it entails the slow buildup of lead in the body over time. Lead poisoning disrupts growth and development and thus is particularly harmful for infants and young children. Symptoms of lead poisoning include irritability, low appetite and energy, hearing loss, headaches, slowed body growth, anemia, constipation, and kidney damage (Bleecker et al. 2005; Chen et al. 2005; Tong et al. 2000; Wright et al. 2003). Reportedly, genetic background and sunlight-induced vitamin D synthesis could play a role in lead poisoning; lead-levels in urban children increase during the summer months with increases in solar exposure (Kemp et al. 2007). Iron deficiency can also increase lead absorption (Wright et al. 2003).

Evidence of lead poisoning can be detected through analysis of human remains (Aufderheide et al. 1981; Aufderheide et al. 1985; Aufderheide et al. 1988; Handler et al. 1986). Analysis of lead levels in hair and bone samples, for instance, has led to the conclusion that many of Beethoven's health problems—which included irritability, abdominal pain, poor digestion, and depression—and his eventual death were the result of lead poisoning (Weiss 2005). Skeletal biology studies of New York African Burial Ground individuals (discussed below) suggest that the health status of many enslaved laborers in New York may have been substantially compromised by lead poisoning (see also Medford, Brown, Carrington, et al. 2009b:83). Lead poisoning has been observed in other enslaved and free populations and was especially chronic in sugar plantations of the West Indies (Aufderheide et al. 1981; Aufderheide et al. 1985; Aufderheide et al. 1988; Corruccini, Aufderheide, et al. 1987; Handler et al. 1986). Some New York African Burial Ground laborers forcibly migrated to New York from the West Indies may have also been exposed to high levels of lead before arriving in New York.

Even medical care in itself was a potential hazard of the time. Medical care in colonial New York was probably as likely—or more likely—to harm patients than to help them. Seventeenth- and eighteenth-century medical care included treatments such as bloodletting, dietary restrictions, and the administration of purgatives. Populations already suffering from poor diets, lead poisoning, unhealthful living conditions, and hard labor were probably further debilitated by medical treatments of the period. Medicine in seventeenth- and eighteenth-century New York was a nascent discipline. Although some viable folk remedies may have been available to enslaved Africans, such as some of those provided by African doctors, other medical practices could have stressed sick individuals to a lethal degree (Medford, Brown, Carrington, et al. 2009b:84).

The historical data indicate that poor nutrition, disease, lead consumption, and alcohol consumption were health hazards to which enslaved laborers were particularly exposed. As is discussed below, the researchers found that the New York African Burial Ground skeletal remains exhibited abundant evidence for nutritional deficiency and infectious disease. Skeletal analyses indicate that nutritional deficiencies were prevalent among enslaved laborers. Porotic hyperostosis and cribra orbitalia indicate nutritional deficiencies and exposure to unsanitary living conditions. Bone-growth defects and suboptimal subadult stature could have resulted from overall poor nutritional status and environmental stressors. High frequencies of dental enamel hypoplasias could indicate a high incidence of malnutrition, disease, or both. Infectious disease may have been responsible for the exceptionally high levels of periostitis observed in the sample. Moreover, malnutrition and disease may have interacted in ways

that were devastating to health. Malnutrition, exposure, infectious disease, and environmental toxins compromised the ability of enslaved laborers in New York to enjoy healthy lives and, in many cases, may have contributed to their early deaths.

Bioarchaeological Evidence for Stress, Disease, and Malnutrition at the New York African Burial Ground

This section discusses dental and skeletal evidence for the effects of enslavement on growth and development, disease, and nutrition. The discussion begins with dental evidence, including analysis of deciduous and permanent dentition for evidence of hypoplasias and dental enamel hypocalcification, and patterns in the occurrence of dental caries, dental abscesses, and antemortem tooth loss. This is followed by a discussion of evidence of skeletal pathologies, including porotic hyperostosis, periostitis, and evidence for treponemal infection. Finally, findings on subadult growth status as developed through comparison of historical and modern stature estimates are presented.

Childhood Health and Dental Development

Early-childhood metabolic disturbances, such as episodes of disease or malnutrition, can be identified through the analysis of hypoplastic defects in dental enamel (Goodman and Rose 1990; Goodman et al. 1988) (Figure 48). Deciduous dental enamel forms beginning in the fifth month in utero to the first year of postnatal life, and permanent enamel develops between birth and 16 years of age. In general, "hypoplasia is a condition of arrested development in which an organ remains below normal size" (Handler and Corruccini 1986:113–114). Dental enamel hypoplasia involves a deficiency in enamel formation on the growing tooth, which temporarily retards its genetically determined growth potential. It is evidenced by "defects in crown development that appear as transverse grooves or series of pits that are partially or entirely around the circumference of the tooth" (Blakey, Mack, Barrett, et al. 2009:143). Dental enamel hypoplasias occur when enamel production, or ameloblastic activity, is interrupted by physiological insult(s). Dental enamel hypoplasias develop during childhood and adolescence and can be interpreted in terms of the occurrence, frequency, severity, and timing of episodes of physical stress (Goodman and Rose 1990). Because "defects on different teeth and in different locations on teeth represent stresses at differing ages during childhood and adolescent growth," dental enamel hypoplasias can be used to track life-history changes in the occurrence of physical stress (Blakey, Mack, Barrett, et al. 2009:143). Frequently associated with premature birth, low birth weight, infectious disease, or malnutrition (Sweeney et al. 1971), the size of a hypoplasia can be used to infer the severity or duration of metabolic stress (Blakey, Mack, Barrett, et al. 2009:143).

Because hypoplasias typically indicate developmental periods of metabolic stress, they are often interpreted to result from infectious disease or episodes of acute malnutrition (Cutress and Suckling 1982; Jontell and Linde 1986; Messer 1985; Pindgord 1982; Scrimshaw 1964; Shafer et al. 1983; Shaw and Sweeney 1980). In a study of Guatemalan children aged 2–3 years, Sweeney et al. (1969) found that slightly less than half (42.5 percent) of all children had enamel hypoplasias, which seemed to correspond to reported infections within the first month of life—diarrhea, thrush, and conjunctivitis. In a second study of Guatemalan children, Sweeney et al. (1971) discovered that severely malnourished children had a 73.1 percent frequency of hypoplasia, whereas the rate dropped to 42.9 percent among more mildly malnourished children.

Enamel Defects at the New York African Burial Ground

The researchers compared enamel-defect frequencies among age groups, sexes, and individuals with and without culturally modified teeth. They also compared the New York African Burial Ground sample to samples from other diasporic contexts (Table 10). A major focus of these studies was to understand the physical quality of childhood life for individuals buried in the New York African Burial Ground and to understand potential differences between childhood development for enslaved laborers raised in Africa, the Caribbean, and New York.

The New York African Burial Ground researchers selected multiple samples of dentition corresponding to multiple stages of childhood development between the fifth month in utero and approximately 16 years of age. A sample of deciduous canines and incisors

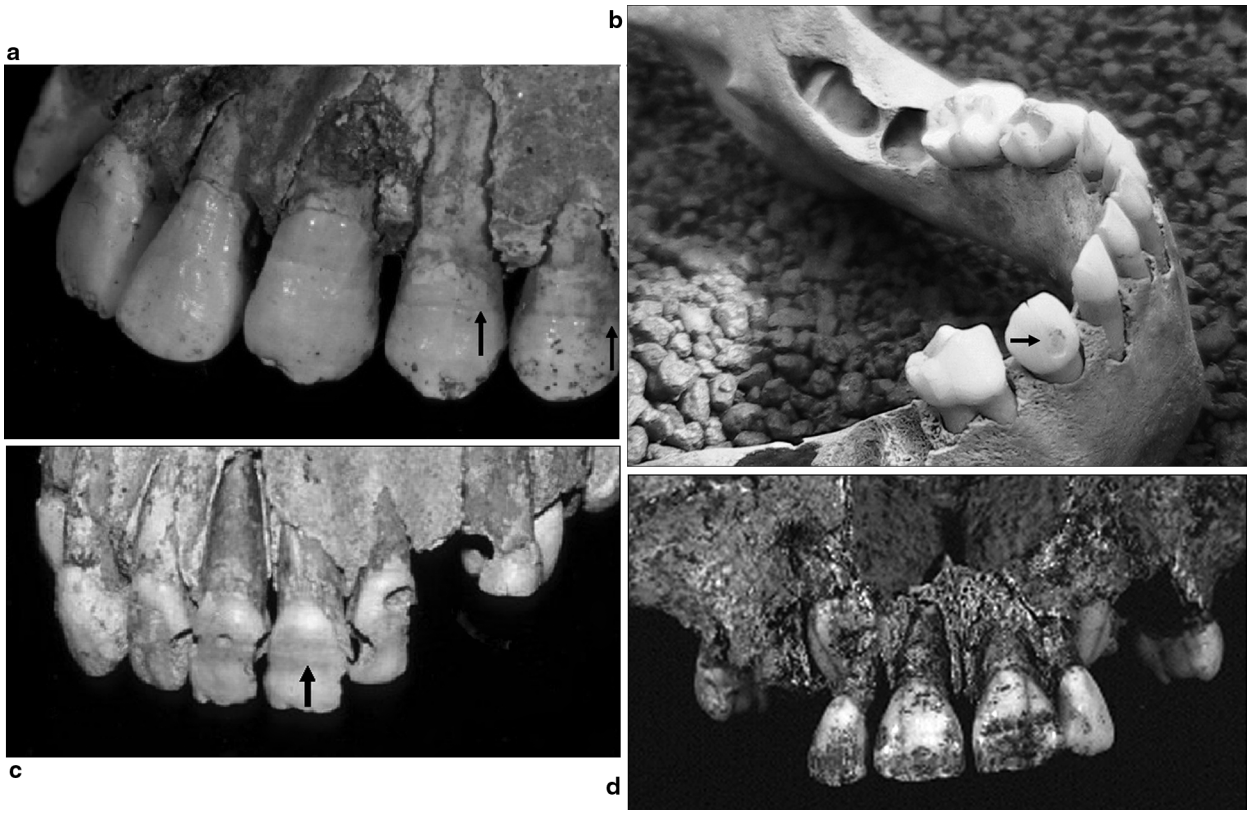


Figure 48. Examples of dental pathology. (*a*) linear enamel hypoplastic lesions in the anterior maxillary permanent dentition in a female aged 20–25 years (Burial 1); (*b*) deciduous mandibular dentition with a single nonlinear hypoplastic pit in the right canine of a subadult aged 3–5 years (Burial 7); (*c*) bands of discoloration caused by hypocalcification in the anterior maxillary permanent dentition in a 24–32-year-old female (Burial 51); (*d*) diagenetic staining affecting dentition in a 55–65-year-old female (Burial 241) (from Volume 1, Part 1 [Blakey, Mack, Barrett, et al. 2009:Figures 57 *(a)*, 59 *(b)*, 58 *(c)*; Mack et al. 2009:Figure 64 *(d)*]).

from 34 individuals was selected to study hypoplasias that developed between the fifth month in utero and the first year of life. A second sample of permanent canines and permanent incisors from 65 individuals was selected to study hypoplasias that occurred during early childhood, between the ages of birth and 6.5 years. A third sample consisted of the permanent third molars from 111 individuals, teeth corresponding to late-childhood development (between 9 and 16 years of age). A fourth sample of canines from 23 individuals was selected to study chronologies of stress during early childhood. The purpose of this last sample was to track at what ages between birth and 6.5 years the episodes of metabolic stress took place.

In the early-childhood study representing the ages from birth to 6.5 years, the researchers found that 46 of 65 individuals (70.8 percent) had hypoplasias. For this developmental period, frequencies of individuals with hypoplasias were higher than the "enslaved populations of Catoctin Furnace, Maryland (Kelley and Angel 1987), or Newton Plantation in Barbados (Corruccini et al. 1985)" and lower than the "freed nineteenth-century Philadelphia First African Baptist Church (FABC) cemetery sample (Blakey et al. 1994) or enslaved African Americans buried in nineteenth-century Charleston, South Carolina, 38CH778 (Rathbun 1987)" (Blakey, Mack, Barrett, et al. 2009:147). Blakey, Mack, Barrett, et al. (2009) suggest that the differences among burial samples may correspond to whether individuals were born enslaved or born free. The later samples from Philadelphia and Charleston had the highest frequencies for hypoplasia in permanent dentition, suggesting to the investigators that the condition of being born enslaved in the Americas carried higher physiological costs than those experienced by children who were born in Africa and enslaved later in life. Local environmental and dietary conditions could also account for some variation in hypoplasias between samples, as the compared samples are geographically and temporally diverse.

Blakey, Mack, Barrett, et al. (2009) also examined gender differences in hypoplasia frequencies for the

Table 10. African Diaspora Skeletons Series Discussed in this Chapter

Site/Location	Time Periods	Total Number of Skeletons	Life Style	Reference
Newton, Barbados	1660–1820	104	plantation enslaved	Jacobi et al. 1992
New York African Burial Ground	1697–1794	419 (358 assessed for pathology)	urban enslaved	
St. Peter Street Cemetery, New Orleans	1720–1810	32	urban enslaved	Owsley et al. 1987
Catoctin Furnace, Maryland	1790–1820	31	industrial enslaved	Kelley and Angel 1987
Waterloo Plantation, Suriname	1793/ 1796–1861	25	plantation enslaved	Khudabux 1991
FABC—8th and Vine, Philadelphia	1821–1843	144	ex-slaves/freeborn	Rankin-Hill 1997
38CH778, South Carolina	1840–1870	36	plantation enslaved	Rathbun 1987
Cedar Grove Cemetery, Arkansas	1890–1927	79	rural farmers	Rose and Santeford 1985b

Note: Adapted from Rankin-Hill 1997:47 (from Volume 1, Part 1 [Rankin-Hill et al. 2009:Table 21]).

sample of teeth corresponding to the ages between birth and 6.5 years. Fifty-nine of the 65 individuals could be sexed. More males than females had hypoplasias between birth and 6.5 years of age. The differences between males and females were not statistically significant ($P^2 = 0.9328$, $df = 1$, $p < 1$), but Blakey, Mack, Barrett, et al. (2009) note that the New York African Burial Ground results match a pattern of elevated hypoplasticity among males in studies of other enslaved populations (Blakey et al. 1994; Khudabux 1991; Owsley et al. 1987; Rathbun 1987). At Catoctin Furnace, Maryland, slight linear enamel hypoplasias were more common among women, and moderate to severe enamel hypoplasias were more common among men, indicating more severe metabolic stress for enslaved male children in comparison to enslaved female children (Blakey et al. 1994).

Blakey, Mack, Barrett, et al. (2009) combined two samples to study relationships between age at death and hypoplasias: the sample of permanent incisors and canines from 65 individuals and the sample of deciduous incisors and canines from 34 individuals. This analysis indicates that individuals who lived longer were less likely to have hypoplasias (Blakey, Mack, Barrett, et al. 2009). The researchers interpret the occurrence of hypoplasias in individuals who died as children as reflecting high levels of stress experienced by enslaved children while they lived in New York. Hypoplasias were less frequent among individuals who died at later ages, suggesting that these were individuals who were not born into slavery but were enslaved and forcibly migrated to New York at a later age.

Late-childhood stress, as evidenced by hypoplasias on third molars that developed between 9 and 16 years of life, was less frequent than early-childhood stress. Nonetheless, there does appear to have been a relationship between the occurrence of hypoplasias and age at death for this sample. Twelve of 27 individuals who died between 15 and 24 years of age (44.4 percent) had evidence for hypoplasias on their third molars, whereas 9 of 84 individuals who died at the age of 25 or older had evidence for hypoplasias on their third molars (10.7 percent) (Blakey, Mack, Barrett, et al. 2009:Figure 62). In comparison to anterior teeth, third molars are less sensitive to hypoplasia and may indicate especially severe episodes of stress. It may be the case that stress registered by hypoplasias on the third molars of individuals between 15 and 24 years of age were contributing factors to the deaths of these individuals. Blakey, Mack, Barrett, et al. (2009:150) suggest that the "Middle Passage [was a] plausible stressor," given that many of these individuals may

have been imported between the ages of 15 and 24. The low percentage of hypoplasias on the third molars of older individuals may also reflect low rates of survival for severe stresses in late childhood. In other words, individuals who survived past the age of 25 may have been lucky enough not to have experienced major episodes of physiological stress as children or young adults. Individuals who died later—past the age of 25—and had not developed hypoplasias between the ages of 9 and 16 may have been enslaved later in life, for instance. To the researchers, these may have been individuals who were enslaved as adults but who had otherwise enjoyed healthy lives before their enslavement.

Age-related occlusal wear could limit the ability to observe hypoplasias on individuals who died at more advanced ages. To control for this problem, Blakey, Mack, Barrett, et al. (2009) removed individuals with severe or unscorable dental wear from the early-childhood and late-childhood samples and recalculated the incidence of hypoplasias for these samples. The removal of problematic cases resulted in a sample size of 48 (of 65) for the early-childhood sample (birth to 6.5 years) and 97 (of 111) for the late-childhood sample (9 to 16 years). With occlusal wear controlled for, the same general patterns were observed in both samples, but the relative frequency of hypoplasias increased somewhat. Therefore, occlusal wear thus does not appear to have artificially dampened the occurrence of hypoplasias in older individuals. This provides further support for the researchers' interpretations.

The researchers also selected a small sample (n = 23) of individuals for whom hypoplasia chronologies on canines could be built. For this study, the total crown height was divided by 6 years—the duration of mandibular canine development—to calculate a yearly incremental growth index. This index was used to estimate the age at which a hypoplasia developed. The frequency of hypoplasias was then compared for two developmental stages—birth to 3.5 years and 3.5–6.5 years. For this study, only 5 of the 23 individuals exhibited hypoplasias that developed in the first 3.5 years of life. By contrast, 20 of the 23 individuals, or 87 percent, exhibited hypolasias that developed between 3.5 and 6.5 years of life. Only 4 of the 23 individuals had evidence for hypoplasias during both developmental periods.

Although these results suggest more frequent or more severe stress between the ages of 3.5 and 6.5 years in comparison to younger ages, the researchers note that analysis is complicated by variation in the sensitivity of different teeth to hypoplasia development (Blakey, Mack, Barrett, et al. 2009). Physiologically, incisors are more likely to display hypoplasias developed between 2 and 2.5 years, whereas canines are more likely to display hypoplasias developed between 5 and 6 years (Goodman and Armelagos 1985). In the New York African Burial Ground sample, the highest frequencies of hypoplasia on canines correspond to stress episodes that occurred between 4 and 5 years of age. Thus, high frequencies of hypoplasia development at older ages may simply result from hypoplasia sensitivity factors. Because of this, Blakey, Mack, Barrett, et al. (2009:153) hypothesize that "this stage was a vulnerable and stressful age for children who survived early infancy and who died as adults . . . [but how] much more stressful the fifth year of age was compared to earlier ages . . . has not been confirmed using enamel defects due to variation in hypoplastic sensitivity across different parts of the crown."

Absent of sensitivity factors, Blakey, Mack, Barrett, et al. (2009:153–154) formulate two hypothetical models to explain why enslaved children between the ages of 3.5 and 6.5 years might have experienced especially high levels of stress. The first model assumes that children with especially high levels of stress were born in New York. Because enslaved children were often sold before the age of 6, "children approaching the age of 6 years may have experienced trauma related to separation from their parents, differential nutrition provisions provided by nonparental custodians or slaveholders, or stresses and increased exposure to disease from induction into domestic or other labor duties" (Blakey, Mack, Barrett, et al. 2009:153).

The second hypothetical model instead assumes that children with exceptionally high levels of stress were enslaved in Africa and imported around the age of 9 or 10. Blakey, Mack, Barrett, et al. (2009) postulate that high levels of stress occurring as children approached the age of 6 could correspond to conditions surrounding or leading up to their initial enslavement. They suggest that episodes of childhood stress were "related to shifts in political power and socioeconomic upheaval within the Atlantic slave trade networks" (Blakey, Mack, Barrett, et al. 2009:154). When all the evidence on hypoplasia development is brought together, Blakey, Mack, Barrett, et al. (2009:154) offer the working hypothesis that "those born in Africa may have had fewer childhood stressors and survived to older ages at death in New York than those who were born in New York City."

Dental Enamel Hypocalcification

Blakey, Mack, Barrett, et al. (2009) also considered age-related differences in dental enamel hypocalcification using a sample of 99 individuals. Dental enamel hypocalcification causes discoloration in the rings of enamel laid down during episodes of physiological stress. Hypocalcification occurs during the final stages of enamel deposition. Adults examined for hypocalcification had permanent dentition, at least one maxillary central incisor, and at least one mandibular canine. Examined children had at least one deciduous maxillary incisor, at least one mandibular canine, and a second molar. Blakey, Mack, Barrett, et al. (2009:Table 37) found that 23 of 37 children under the age of 15 (62.2 percent) had hypocalcification. Hypocalcification was less frequent among older individuals, occurring in 2 of 20 individuals aged 15–24 (10 percent) and in 10 of 45 individuals aged 25 and older (22.2 percent).

Although statistically significant, differences in hypocalcification between deciduous and permanent dentition may simply relate to differences between primary and secondary dentition and "have nothing to do with stressor prevalence" (Blakey, Mack, Barrett, et al. 2009:150). Nonetheless, in combination with the hypoplasia data, high frequencies of hypocalcification in deciduous dentition could "indicate the extremely high levels of stress experienced in utero and during the first year of life among the New York African Burial Ground children who died before the age of 15" (Blakey, Mack, Barrett, et al. 2009:156). Ultimately, Blakey, Mack, Barrett, et al. (2009:156) conclude that data on dental development "indicate that the quality of life for Africans was greatly compromised upon entry into the New York environment of enslavement through the processes of either birth or forced migration."

Dental Pathologies as Indicators of Disease, Diet, and Nutrition

Mack et al. (2009) investigated disease, diet, and nutrition by examining patterns in the occurrence of dental caries, dental abscesses, other dental pathologies, and antemortem tooth loss (Larsen 1997). Caries typically form through the action of acidogenic bacteria that grow in plaque on the surfaces of teeth (Figures 49 and 50). Mack et al. (2009:158) define caries as "progressive tooth demineralization resulting from localized fermentation of food sugars and carbohydrates by bacteria."

Caries are most common on the "occlusal [chewing or grinding] surface of multicusped teeth . . . where plaque can adhere to a tooth surface" and tend to concentrate on posterior and maxillary teeth (Goodman and Martin 2002:45). Foods rich in carbohydrates, particularly highly processed ones such as maize meal, exacerbate caries formation. Although multiple factors contribute to caries formation—such as hygiene, pathogens, and environment—increased frequencies of caries in the prehistoric record is repeatedly associated with dietary change and increased dependence on agriculture. Caries rates are low for foraged diets (2 percent), somewhat elevated for mixed diets (5 percent), and both higher and more variable for agriculturally based diets (2–20 percent). In prehistoric North America, increased caries rates are associated with increased maize consumption. Worldwide, increased caries rates are linked to fundamental subsistence changes, especially those involving intensification of food production and changes in food preparation (Caselitz 1998; Corbett and Moore 1976; Goodman and Martin 2002; Hardwick 1960; Keene 1980; Larsen 1984; Martin et al. 1984; Moore and Corbett 1971, 1973, 1975; Mummery 1869; Perzigian et al. 1984).

Dental Pathologies at the New York African Burial Ground

For the New York African Burial Ground study, recorded pathologies included the number and surface of caries by tooth, the presence and location of abscesses, molar agenesis (failure of molar to form), and dental crowding. Differences between males and females within the sample and differences between the New York African Burial Ground sample and other skeletal samples were evaluated. Only individuals of known age and sex were used. As in other studies, subadults were defined as younger than 15 years of age, and adults were defined as older than 15 years of age.

Dental caries were most frequently observed in "molars, followed by premolars and single-cusped incisors and canines" (Mack et al. 2009:158). Abscesses were also most frequent in molars. Females had higher rates of carious teeth as well as higher rates of tooth loss; 59 of 70 of females (84.3 percent) and 70 of 96 males (72.9 percent) had at least one carious tooth (Figure 51). On average, females had 5.2 carious teeth as opposed to 4.0 for males. Similarly, females had an

Figure 49. Molar caries in a male aged 26–35 years (Burial 101) (from Volume 1, Part 1 [Mack et al. 2009:Figure 67]).

Figure 50. Caries formation in a female aged 35–40 years (Burial 107) (from Volume 1, Part 1 [Mack et al. 2009:Figure 69]).

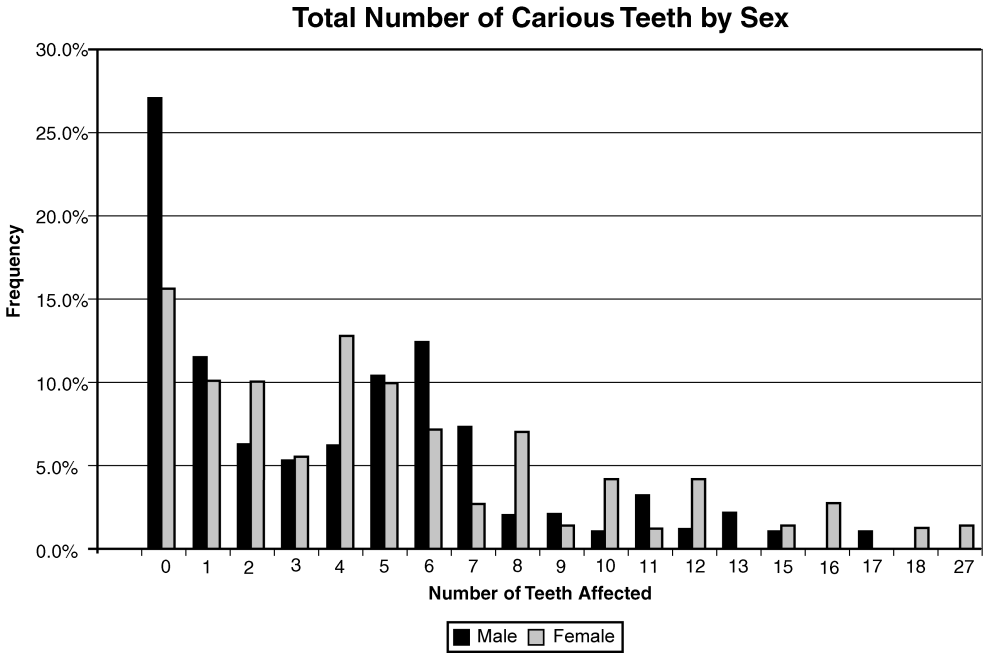


Figure 51. Total number of carious teeth by sex (from volume 1, Part 1 [Mack et al. 2009:Figure 66]).

average of 4.3 lost teeth as opposed to 3.7 lost teeth for men. Overall, the high incidence of dental caries and tooth loss is not surprising, given the carbohydrate-rich diets of the period. Dental care was evidently lacking for the New York African Burial Ground sample, as many abscesses went untreated.

Mack et al. (2009) compared dental pathology to other eighteenth- and nineteenth-century samples and a twentieth-century forensic sample—Catoctin Furnace, Remley Plantation, Belleview Plantation, Charleston elites, the Philadelphia's First African Baptist Church, a sample of African American soldiers, samples of African Americans from Arkansas and Texas, and the Rochester Poorhouse sample (Table 11; see Mack et al. 2009:Table 44 for Catoctin Furnace results). The number of carious teeth in

Table 11. New York African Burial Ground Dental Pathology Mean Comparison with other Eighteenth- and Nineteenth-Century Samples (Rathbun and Steckel 2002)

Site/Sex	No. Teeth Lost	No. Carious Teeth	No. Abscesses
African Burial Ground, New York			
Male	4	4	1.5
Female	4	5	1.4
Remley Plantation, South Carolina			
Male	7	2	0.5
Female	12	4	0.1
Belleview Plantation, South Carolina			
Male	5	6	—
Female	6	3	0.3
Charleston elites, Charleston, South Carolina			
Male	—	—	0.3
Female	2	1	1.0
FABC, Philadelphia, Pennsylvania			
Male	7	7	1.0
Female	5	9	1.0
Black soldiers, South Carolina			
Male	1	2	1.0
Blacks, Arkansas			
Male	6	5	0.6
Female	8	4	0.4
Blacks, Texas			
Male	3	4	0.1
Female	3	4	0.1
Rochester Poorhouse, Charleston, South Carolina			
Male	5	5	1.0
Female	5	6	0.9

Note: From Volume 1, Part 1 (Mack et al. 2009:Table 43).

these samples ranged from none to nine and were highest for males and females of the First African Baptist Church. Tooth loss was highest in the Remley Plantation sample. The New York African Burial Ground averages fell in the middle range for tooth loss and the number of carious teeth for males and females (Mack et al. 2009:Table 43). Abscesses were most frequent for the New York African Burial Ground, leading Mack et al. (2009) to conclude that enslaved New Yorkers had less access to dental care than the other groups. Dental care as a whole was poor in New York while the burial ground was in use and became more common after the burial ground closed.

Overall, odontological evidence suggests that enslaved New Yorkers suffered fairly high rates of dental pathologies. Dental pathologies likely resulted from deficiencies in diet and dental hygiene as well as infectious disease and may be linked, in part, to the carbohydrate-rich diets and unhealthful living

conditions common to enslaved populations of seventeenth- and eighteenth-century New York.

Skeletal Indicators of Disease, Diet, and Nutrition

The researchers developed data on skeletal indicators of pathology using Buikstra and Ubelaker's (1994) *Standards for Data Collection from Human Skeletal Remains,* representing one of the first efforts to comprehensively implement these standards, which were new when analysis began (Blakey 2009a). Pathology codes modified from Buikstra and Ubelaker were entered into a database. Of the 391 individuals available for analysis, the researchers were able to analyze 358. The remaining individuals were not subject to evaluation, because they were either too poorly preserved or in poor condition or had been pedestaled in soil containing potentially harmful fungi and were therefore quarantined. The sample of 358 individuals included 105 subadults younger than 15 years old, 237 adults 15 years old or older, and 16 individuals that could not be aged and sexed. Of the adults, 115 were males, 85 were females, and 37 could not be sexed (Null et al. 2009).

Skeletal indicators of pathology were observed for 306 of the 358 individuals described (85.5 percent). Null et al. (2009) investigated the prevalence of indicators of pathology and numbers of healed versus active lesions according to age and sex. The pathology data were also compared with other archaeological samples of formerly enslaved populations, rural farmers, and enslaved populations from urban, industrial, and plantation settings (see Table 10). Samples compared with the New York African Burial Ground included Newton Plantation (Jacobi et al. 1992); the St. Peter Street Cemetery, New Orleans (Owsley et al. 1987); Catoctin Furnace (Kelley and Angel 1987); Waterloo Plantation, Suriname (Khudabux 1991); the First African Baptist Church (Rankin-Hill 1997); Site 38CH778 (Rathbun 1987); and the Cedar Grove Baptist Church Cemetery, Arkansas (Rose and Santeford 1985b). The specific samples used for comparison with the New York African Burial Ground varied with pathology indicators and the availability of comparable data. Of particular note is that the New York African Burial Ground sample is by far the largest of any of the compared samples. To understand the effects of disease, diet, and nutrition on health at the New York African Burial Ground, the researchers evaluated the occurrence of periostitis, osteomyelitis, evidence for treponemal infection, porotic hyperostosis, and the co-occurrence of indicators for nutritional deficiencies and infectious disease.

Periostitis

Periostitis refers to abnormal lesions or growth on the periosteal surfaces of skeletal elements (Figure 52). Periostitis is a skeletal response to infectious disease or trauma. The two causes can be distinguished: "trauma-induced periosteal reactions tend to be small, localized, and nondestructive, whereas infectious diseases tend to be generalized and destructive, and they usually affect multiple long bones" (Goodman and Martin 2002:34).

A common problem with interpreting periosteal evidence of infection is what Wood et al. (1992) have termed the "osteological paradox." The absence of bony reactions to infections could indicate either especially healthy individuals whose immune systems resisted infections or disease-sensitive individuals who died prior to skeletal involvement. Healed lesions associated with older individuals could indicate healthy persons whose bodies successfully resisted infection. Interpreting periostitis, then, requires evaluation of multiple factors, such as age at death and other evidence of skeletal pathology (Goodman and Martin 2002). The fact that rates of periostitis appear to be associated with mortality in the New York African Burial Ground sample could indicate that infectious diseases contributed to mortality.

Typically, cases of periostitis are nonspecific, meaning that differential diagnosis of specific infections is not possible. Microorganisms, including *Staphylococcus* and *Streptococcus*, are common causes of infectious disease leading to periostitis. In combination with other evidence, periostitis can be tied to specific diseases, such as treponemal infection or tuberculosis (Goodman and Martin 2002; Ortner 2003; Ortner and Putschar 1981). For the Cedar Grove Baptist Church cemetery sample, Rose (1985:151) interpreted the high incidence of active lesions (41.2 percent) among children dying between 3 and 20 months as the result of weanling diarrhea. Protein deficiency induced when infants are weaned from breast milk to amino-deficient food, such as cornmeal, results in lowered disease resistance and a cycle of diarrhea and infectious disease (Scrimshaw et al. 1968). Null et al. (2009) interpreted periostitis as a general indicator of infectious disease, unless additional evidence could be used to support a more specific diagnosis.

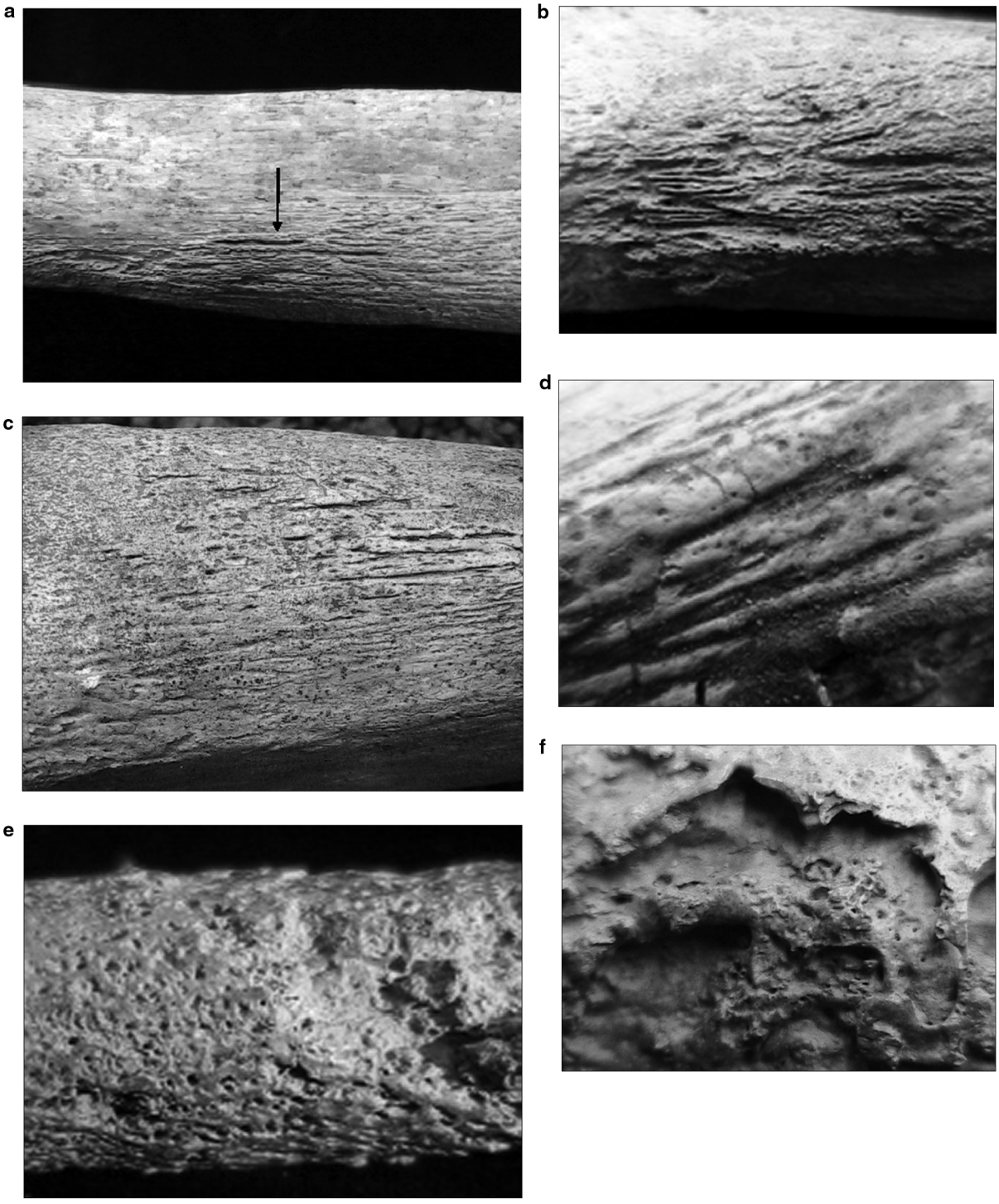


Figure 52. Osteological indicators of infection. (*a*) active periostitis on left posterior ulna of a 35–45-year-old male (Burial 70) and (*b*) magnified view; (*c*) healed, sclerotic periostitis on right lateral tibia of an adult male (Burial 69); (*d*) healed, sclerotic periostitis on left lateral tibia of a 45–50-year-old male, magnified (Burial 20); (*e*) osteomyelitis in the right anterior distal femur of a 50–60-year-old male (Burial 32) and (*f*) magnified view (from Volume 1, Part 1 [Null et al. 2009:Figures 76 *(a)*, 77 *(b)*, 78 *(c)*, 79 *(d)*, 88 *(e)*, 89 *(f)*]).

Periostitis at the New York African Burial Ground

Two hundred of the 358 analyzed individuals (55.9 percent) had lesions indicative of periostitis. Of the individuals with periostitis, over 90 percent had multiple infectious loci. For subadults, infectious loci occurred most frequently on femora, followed by humeri and tibiae. For adults, infectious loci occurred most frequently on tibiae, followed by femora and fibulae. For their analyses, sample size appears to have varied depending on the dimension considered and the availability of data for that dimension.

Null et al. (2009) also analyzed how many individuals had at least one lesion characterized as "clearly present" which they equate with the severity of the lesion. "Clearly present" lesions were rare among subadults, with only 3 of 44 (6.8 percent) exhibiting "clearly present" lesions. By contrast, almost half (n = 68, or 44.4 percent) of adults with periostitis had lesions described as "clearly present." In addition, males more often had "clearly present" lesions than females, despite the fact that periostitis was equally common among adult males and females. More than half the males with periostitis (n = 44, or 54.3 percent) had "clearly present" lesions whereas about one-third of females (n = 21, or 35 percent) had "clearly present" lesions (Null et al. 2009:Table 47). In essence, adults and males were far more likely than subadults and females to have at least one "clearly present" lesion.

Differences were observed between subadults and adults in terms of whether they had active, healed, or both active and healed lesions at the time of death. Active lesions are not yet remodeled and "generally display a very fibrous and vascularized irregular new layer of bone. Healed or remodeled lesions show resorption and redistribution of new bone as the bone is incorporated into the normal cortex" (Goodman and Martin 2002:34). Healed lesions indicate an ability to respond and adapt to infectious disease. Almost three-fourths of adults with periostitis had only healed lesions, and about one-fifth had both active and healed lesions. Only a negligible percentage of adults had active lesions only. No significant differences were observed between males and females in the occurrence of active or healed lesions, or both. By contrast, subadults more often had active lesions, as opposed to healed lesions. Healed lesions were not observed in the nine individuals younger than 1 year old, but first appeared in individuals between 1.0 and 4.9 years of age. Differences between subadults and adults were statistically significant and indicate that in comparison to adults "children were prone to dying during their first active infection that was sufficiently severe to leave bony evidence" (Null et al. 2009:175).

The researchers compared periostitis rates among the New York African Burial Ground, Philadelphia First African Baptist Church cemetery (Rankin-Hill 1997), 38CH778 (Rathbun 1987), and Cedar Grove Baptist Church cemetery (Rose and Santeford 1985b) samples. The New York African Burial Ground sample exhibited similar, although slightly lower, incidences of periostitis in comparison to Cedar Grove (Figure 53). When separated according to age and sex, adult rates of periostitis at the New York African Burial Ground generally fell between the Cedar Grove and First African Baptist Church samples.

According to Null et al. (2009:178), the patterning of periostitis in males and females in the New York African Burial Ground sample "mirrors their sex-specific mortality profiles." Evidence for periostitis suggests that many New York African Burial Ground individuals experienced infectious disease and that poor nutrition may have increased susceptibility to infectious disease. At the very least, infectious disease would have diminished the quality of life for enslaved Africans, and for some, especially the young, may have contributed to an early death.

Other Infectious Processes

In addition to periostitis, New York African Burial Ground researchers also observed evidence for meningeal reactions, osteomyelitis, and treponemal infections. A general diagnosis of a meningeal reaction was made for six children younger than 6 years of age and one 25–35-year-old female. Two adult females, two adult males, and one individual of indeterminate age and sex had osteomyletis, indicating possible bacterial infection of bone or bone marrow in these individuals. Three of the aged individuals were older individuals past the age of 40, whereas the other aged individual was 17–21 years in age. Systemic osteomyelitis was observed in one individual, the 50–60-year-old male interred in Burial 32 (see Figure 52e and f).

Treponemal Infection

Traditionally, treponemal infections have been classified according to "four different types or syndromes: pinta, yaws, endemic syphilis (also known as bejel, dichuchwa, njovera, treponarid, and nonvenereal syphilis), and venereal syphilis" (Hutchinson and Richman

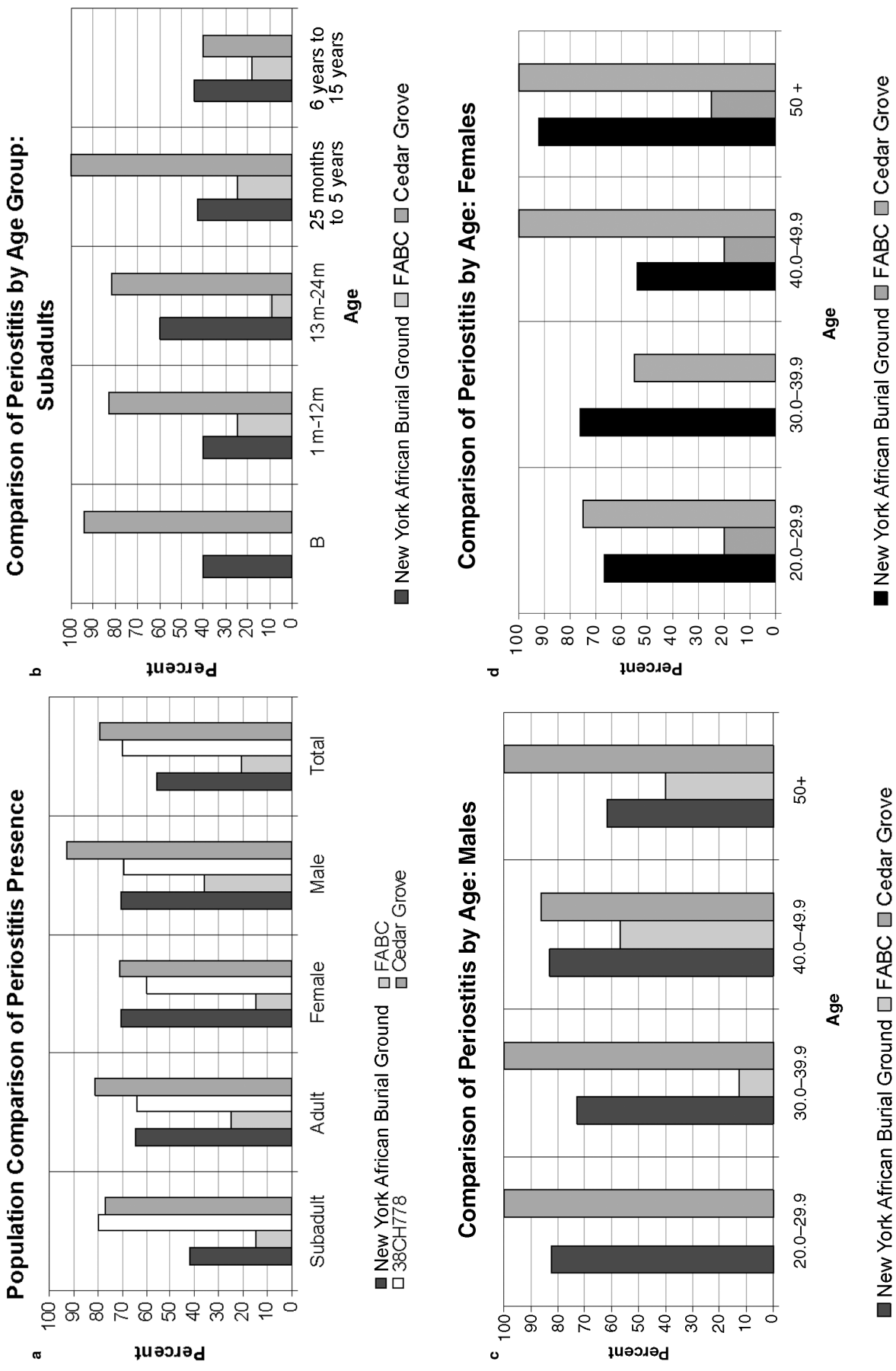


Figure 53. Population comparison of periostitis presence: (*a*) total sample; (*b*) subadult age groups: (*c*) males, by age; (*d*) females, by age (from Volume 1, Part 1 [Null et al. 2009:Figures 80 (*a*), 83 (*b*), 86 (*c*), 87 (*d*)]).

2006:544). Congenital syphilis refers to the disease when contracted in utero and passed from mother to infant. Treponemal diseases are caused by one of "four human pathogens, *T. [Treponema] pallidum* subspecies *pallidum* (venereal syphilis), *T. pallidum* subspecies *endemicum* (endemic syphilis or bejel), *T. pallidum* subspecies *pertenue* (yaws), and *T. carateum* (pinta)" (von Hunnius et al. 2006:559). All four treponemal diseases affect the skin and are thus sometimes referred to as skin diseases. Three forms of treponemal disease—yaws, endemic syphilis, and venereal syphilis—leave bone lesions and can thus be identified through paleopathology (Hutchinson and Richman 2006).

Treponemal Infection at the New York African Burial Ground

A constellation of pathologies can occur as a result of treponemal infection (Figure 54). One of these, "saber shin," can result from either endemic syphilis or congenital syphilis. Saber shin is a sharp-edged, anteriorly convex tibia. Null et al. (2009) initially identified saber shin in 11 of the 249 individuals (4.4 percent) with tibiae that could be assessed. Ten of the 11 affected individuals were adult males. Null et al. (2009:182) used a suite of additional descriptors to identify additional possible cases of saber shin, including the presence of "periostitis, anterior bowing, medial-lateral flattening (platycemia), and/or fusiform expansion of the diaphysis/anterior crest." This search resulted in an additional 29 individuals who may have suffered from a treponemal infection, raising the possible incidence of treponemal infection from 4.4 to 16.1 percent. All affected individuals appear to have been more than 15 years of age, and of the 35 that could be sexed, 28 were male. Affected males were typically between 30.0 and 54.9 years of age; most affected females were between 30.0 and 34.9 years old.

To differentiate among different treponemal diseases, the researchers then examined patterning in lytic and blastic lesions and considered which specific diseases were most likely based on disease ecology. Three-quarters of the 40 individuals had only active lesions, with the remaining 25 percent having active or active and healed lesions. The researchers believe that because endemic syphilis typically is found in arid climates of the Old World, including parts of Africa (Ortner and Putschar 1981; Steinbock 1976), endemic syphilis can be ruled out. Pinta, which attacks only the skin and occurs mainly in the New World, also was ruled out as a cause of the lesions. As a consequence, Null et al. (2009) believe it was necessary only to differentiate between yaws, venereal syphilis, and congenital syphilis.

Very few individuals exhibited any of the classic evidence for venereal syphilis. A possible stellate scar, often associated with venereal syphilis, was observed in only one individual, Burial 230 (Null et al. 2009:184) (see Figure 54b). A lytic lesion that could be interpreted as a cloaca associated with venereal syphilis was observed in one individual, Burial 418. Otherwise, evidence for venereal syphilis was lacking. Further, the presence of saber shin in many adult individuals suggests onset of treponemal infection at an early age, which would also make venereal syphilis less likely.

Having eliminated pinta, endemic syphilis, and venereal syphilis as likely forms of treponemal infection in the New York African Burial Ground sample, Null et al. (2009) suggest that either yaws or congenital syphilis were responsible. In either case, it is likely that the onset of yaws or congenital syphilis occurred prior to arrival in New York. Venereal syphilis was rare in Africa during the seventeenth and eighteenth centuries. Null et al. (2009:185) hypothesize that, given the low rate of venereal syphilis evident in the New York African Burial Ground sample, "infection by congenital syphilis . . . may be coming from an affected external population." They posit that, given the requirement of venereal transmission for congenital syphilis to persist, congenital syphilis would have had to have been acquired where mothers were exposed to venereal syphilis. Null et al. (2009) suggest that the mothers of individuals with congenital syphilis interred at the New York African Burial Ground may have acquired the venereal disease in the Caribbean, where venereal disease had spread into the enslaved population.

An alternate model proposed by Null et al. (2009) is that the treponemal infections they observed in the New York African Burial Ground sample did not represent congenital syphilis, but yaws. Yaws was observed historically in the enslaved population of New York and could have been maintained in the local disease environment through continuous importation of enslaved Africans. Genetic analysis, ESA, and isotopic analysis might possibly be used to tease these alternative models apart (see Chapter 4).

Further examination of these models is important because of the close relationship between untreated syphilis and high infant mortality as well as the social

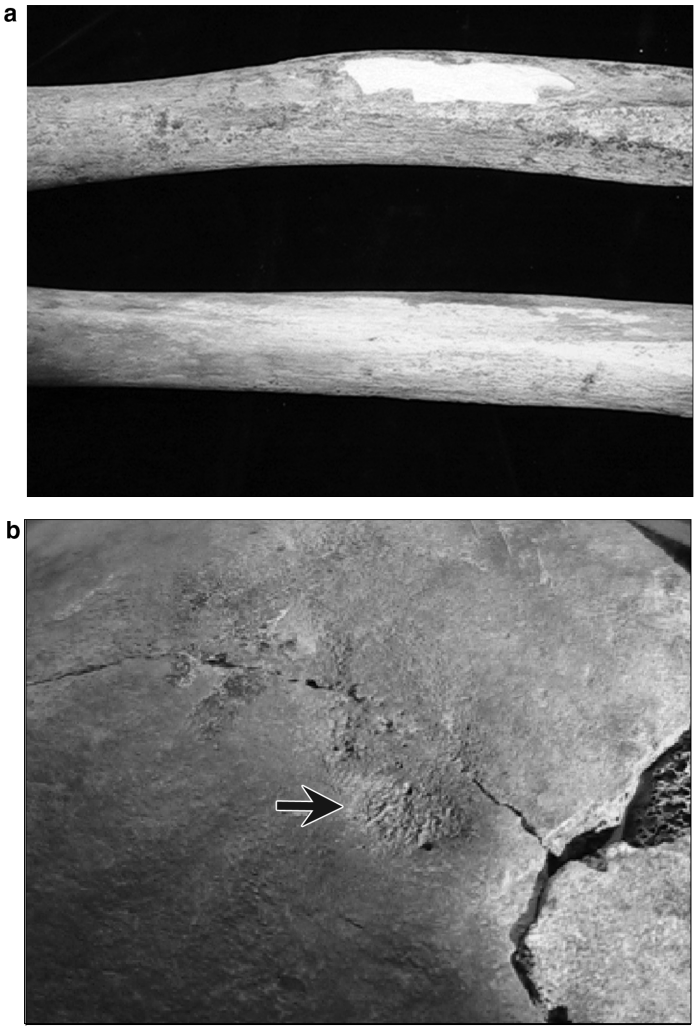


Figure 54. Possible osteological indicators of syphilis: (*a*) left femoral midshaft of Burial 101 (26–35-year-old male, *top*) showing "saber shin" bowing in comparison to a healthy femur from the Cobb collection (CC2, *bottom*); (*b*) a cranial lesion (indicated by an arrow) in the left parietal of a 55–65-year-old female (Burial 230). The lesion resembles a stellate scar but lacks the billowing of its margins and other typical characteristics of such scars and could instead represent a depression fracture (from Volume 1, Part 1 [Null et al. 2009:Figures 90 *(a)*, 91 *(b)*]).

implications of venereal disease in enslaved populations. Congenital syphilis can cause miscarriages, premature births, stillbirths, or death of newborn babies. Infants with congenital syphilis may suffer from a host of disabilities: deformities, developmental delays, blindness, seizures, rash, fever, swollen liver and spleen, anemia, and jaundice, as well as the symptoms of late-stage syphilis, including osteological, cardiovascular, and neurological damage (U.S. Department of Health and Human Services 2005). Sexual abuse of enslaved African women may have contributed to the spread of the disease.

Porotic Hyperostosis and Cribra Orbitalia

Ortner (2003:55) defines porotic hyperostosis as "any porous enlargement of bone tissue." The condition is identified by porous, coral-like lesions associated with thickening of the diploe (soft, spongy, or cancellous material between the inner and outer surfaces of cranial bone) (Figure 55). For decades, porotic hyperostosis has been thought to result from iron-deficiency anemia, but infection or other nutritional disorders, such as scurvy and rickets, were considered other possible causes. Porotic lesions on the superior border of the eye orbits, referred to as cribra orbitalia, are often interpreted as a result from the same disease process as porotic hyperostosis (Goodman and Martin 2002; Ortner 2003; Stuart-Macadam 1987, 1989, 1992, 1998), but recent work (Walker et al. 2009) suggests separate, but overlapping, etiologies for porotic hyperostosis and cribra orbitalia.

Recently, Walker et al. (2009) have refuted iron-deficiency anemia as a possible cause of porotic hyperostosis or most cribra orbitalia lesions. These authors also suggest that porotic hyperostosis and

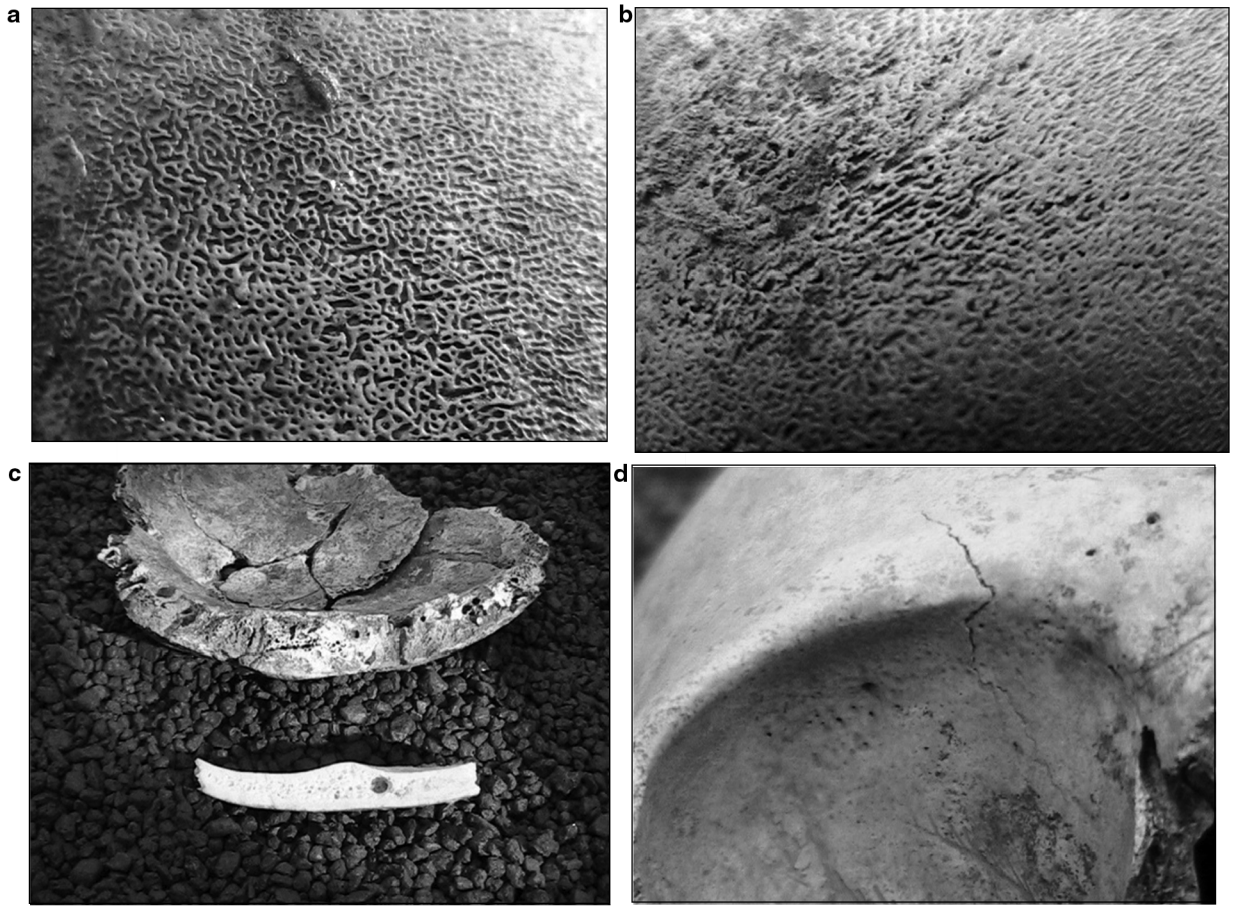


Figure 55. Examples of porotic hyperostosis. (*a*) porotic hyperostosis in right posterior parietal of a 3–5-year-old child (Burial 138); (*b*) porotic hyperostosis of a 4.5–10.5 month old infant (Burial 64); (*c*) thickened diploe of occipital adjacent to lambda of a 35–45-year-old male (Burial 151), compared with a normal specimen at the same location; (*d*) cribra orbitalia of the right orbit of a 5–7-year-old child (Burial 39) (from Volume 1, Part 1 [Null et al. 2009:Figures 93 *(a)*, 94 *(b)*, 95 *(c)*, 97 *(d)*]).

cribra orbitalia may not result from the same disease process. Walker et al. (2009:119) conclude that "porotic hyperostosis and many cribra orbitalia lesions are a result of the megaloblastic anemia acquired by nursing infants through the synergistic effects of depleted maternal vitamin B_{12} reserves and unsanitary living conditions that are conducive to additional nutrient losses from gastrointestinal infections around the time of weaning." Walker et al. (2009:119) also conclude that lesions identified as "cribra orbitalia can be attributed to a greater range of causes than porotic hyperostosis, [including] subperiosteal bleeding associated with a codeficiency of vitamin C and B_{12}." Presciently, the New York African Burial Ground researchers cautiously interpreted porotic hyperostosis "as a general indicator of nutritional inadequacy," rather than a specific indicator of conditions like iron-deficiency anemia (Null et al. 2009:186).

Porotic Hyperostosis at the New York African Burial Ground

A high incidence of porotic hyperostosis was observed in the New York African Burial Ground sample. Evidence for porotic hyperostosis was present on almost half of 275 observable crania (n = 130, or 47.3 percent). Porotic hyperostosis was more common among adult males than adult females. Fifty-five of 95 adult males (57.9 percent) and 32 of 73 adult females (43.8 percent) displayed porotic hyperostosis, a difference that was significant at the 90 percent confidence level. Also statistically significant at the 90 percent confidence level, proportionally more adults than subadults had evidence for porotic hyperostosis; 93 of 184 adults

Table 12. Porotic Hyperostosis, All Cranial Locations

Age/Sex Category	n[a]	Total (%)	Active (%)[b]	Healed (%)[b]	Both (%)[b]
Subadult	88	39.8	16.7	83.3	0.0
Adult[c]	184	50.5	1.5	89.4	9.1
Female	73	43.8	0.0	94.7	5.3
Male	95	57.9	2.3	86.4	11.4
Total[c]	275	47.3	4.8	88.1	7.1

Note: From Volume 1, Part 1 (Null et al. 2009:Table 52).
[a] Equals number of individuals with observable cranial elements.
[b] Status values represent the percentage of those in each group with evidence of porotic hyperostosis; cases of thickened diploe have been removed.
[c] Discrepancies in sample numbers are the result of individuals that could not be aged and/or sexed.

(50.5 percent) and 35 of 88 subadults (39.8 percent) exhibited porotic hyperostosis (Table 12).

Active lesions may indicate nutritional deficiencies that contributed to morbidity and mortality. At the least, active lesions indicate functionally compromised individuals who died in poor health. Healed lesions, by contrast, indicate a capacity to respond effectively to stressors. As with other lesions, subadults were more likely to have only active cases. For porotic hyperostosis, active lesions were observed on 16.7 percent of affected subadult crania and 10.6 percent of affected adult crania, but the difference is slight and not statistically significant (Null et al. 2009:Table 52). When individuals with active or both active and healed lesions are considered, males were around 3 times more likely than females to have had active lesions indicative of porotic hyperostosis.

Rates were generally lower for cribra orbitalia than porotic hyperostosis on the rest of the cranium. Cribra orbitalia was observed in 54 of 228 (23.7 percent) assessed individuals (Null et al. 2009:186). Lesions indicative of cribra orbitalia were observed more often in subadults, in comparison to adults, and more often in males, in comparison to females, but in neither comparison were the differences statistically significant (Table 13). Porotic hyperostosis in the New York African Burial Ground sample occurred at a high overall rate compared to other samples of enslaved populations (Figure 56). When compared to crania from the First African Baptist Church (Rankin-Hill 1997) and the Cedar Grove Baptist Church cemetery (Rose and Santeford 1985b) samples, porotic hyperostosis was found at the highest overall rate in the New York African Burial Ground sample. This appears to be the

Table 13. Frequencies of Cribra Orbitalia in the NYABG Population

Age/Sex Category	n[a]	Total (%)	Active (%)[b]	Healed (%)[b]	Both (%)[b]
Subadult	63	28.6	21.4	78.6	0.0
Adult[c]	164	22.0	2.9	91.4	5.7
Female	66	18.2	0.0	91.7	8.3
Male	86	26.7	4.5	90.9	4.5
Total[c]	228	23.7	8.2	87.8	4.1

Note: From Volume 1, Part 1 (Null et al. 2009:Table 54).
[a] Equals the number of individuals with observable eye orbits.
[b] Status values represent the percentage of those in each group with evidence of cribra orbitalia; cases of thickened diploe have been removed.
[c] Discrepancies in sample numbers are the result of individuals that could not be aged and/or sexed.

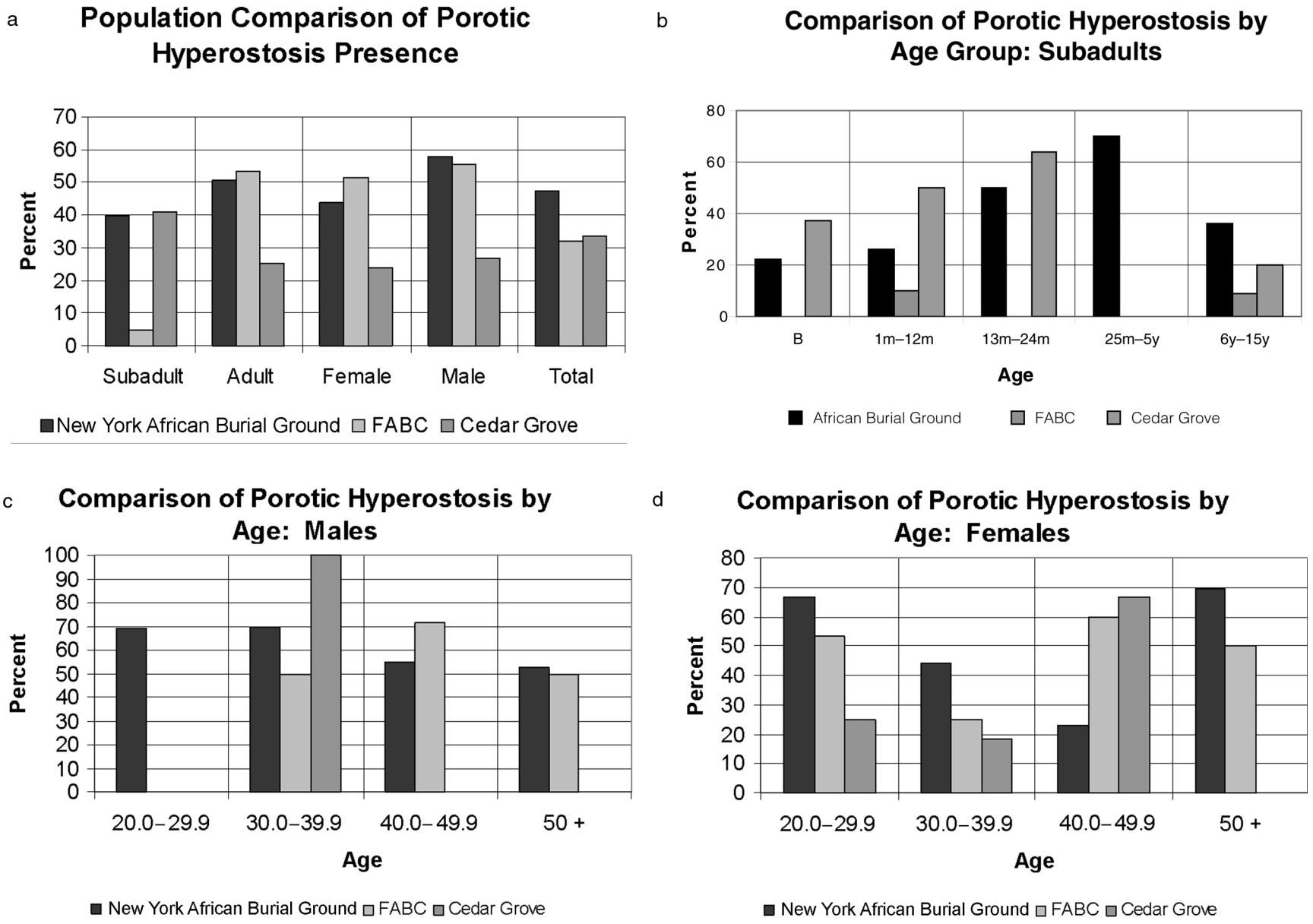


Figure 56. Population comparison of porotic hyperostosis presence: (*a*) total sample; (*b*) subadult age groups; (*c*) males, by age; (*d*) females, by age (from Volume 1, Part 1 [Null et al. 2009:Figures 98 *(a)*, 102 *(b)*, 105 *(c)*, 104 *(d)*]).

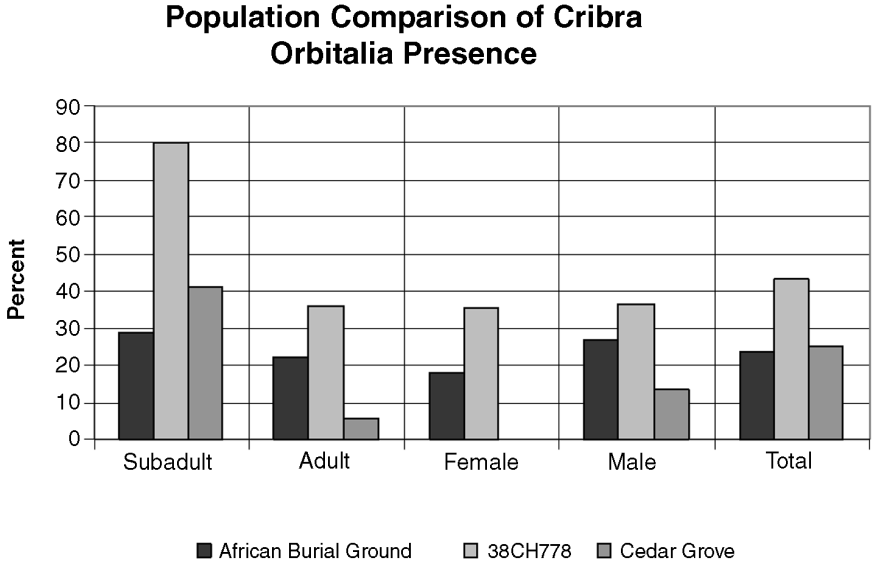


Figure 57. Population comparison of cribra orbitalia presence (from Volume 1, Part 1 [Null et al. 2009:Figure 99]).

result of high rates of porotic hyperostosis among New York African Burial Ground subadults and adult males. In comparison to the New York African Burial Ground, porotic hyperostosis in subadults occurred at comparatively low rates in the First African Baptist Church sample and in adults occurred at comparatively low rates in the Cedar Grove sample.

Among subadults, rates of porotic hyperostosis were relatively high for the New York African Burial Ground sample. Around 40 percent of New York African Burial Ground subadults were affected. By contrast, only 5 percent of the First African Baptist Church subadults were affected (Null et al. 2009:Figure 98). Porotic hyperostosis was most common for New York African Burial Ground subadults between the ages of 1 and 4.9 (Null et al. 2009:Figure 101).

The researchers compared rates of cribra orbitalia among the New York African Burial Ground, Site 38CH778, and Cedar Grove samples (Figure 57). The total incidence was highest for the Charleston Site 38CH778 enslaved population and similar between New York African Burial Ground and Cedar Grove. The subadult incidence (80 percent) for Site 38CH778 was more than double than it was for the other samples. Only the total population comparison was statistically significant (Null et al. 2009:186).

Possible Causes of Porotic Hyperostosis and Cribra Orbitalia

These patterns suggest that, in contrast to other samples of enslaved populations, New York African Burial Ground individuals experienced particularly high nutritional or pathogenic stress as subadults and as adults. This raises the question of what specific conditions may have contributed to the incidence of porotic hyperostosis and cribra orbitalia among New York African Burial Ground individuals. One possibility is that, in comparison to Cedar Grove and First African Baptist Church, the New York African Burial Ground individuals depended more on foods with low bioavailability of iron, such as cornmeal mush. Maize was a staple part of the diet of African New Yorkers, but Walker et al.'s (2009) work suggests that iron-deficiency anemia is not a likely cause of either condition. Vitamin B_{12}–induced megaloblastic anemia is now considered a more likely cause of porotic hyperostosis. The etiology of cribra orbitalia is somewhat complex and probably includes megaloblastic anemia as well as vitamin C deficiency. People with these orbital lesions probably were suffering from multiple nutritional deficiencies (Walker et al. 2009). Either condition in the New York Africans could suggest that rations of fish and meat, which are major sources of vitamin B_{12}, were insufficient. Vitamin C from fresh fruits and vegetables may have also been rare in the diet, particularly during the winter season as well as during ocean voyages. Historical information on New York African diets suggests other nutritional deficiencies were likely. Dietary deficiencies could have also been exacerbated by gastrointestinal parasites and lead consumption.

The presence of indicators of scurvy was not investigated, but Null et al. (2009) did investigate patterns in medial/lateral bowing of lower limbs as a potential

indicator of rickets. Rickets can be caused by vitamin D deficiency or calcium deficiency and is sometimes associated with porotic hyperostosis. Some New York African Burial Ground individuals (n = 34 of 285, or 11.9 percent) exhibited medial-lateral bowing of the lower limbs, suggesting that rickets did occur in the population (Null et al. 2009:195). The number of individuals for whom the condition was clearly present, however, was considerably smaller (n = 7 of 285, or 2.5 percent) than the number of individuals who exhibited less clear indicators. Medial-lateral bowing of the lower limbs was observed more often in adults of both sexes in comparison to subadults, but the difference was only significant at the 85 percent confidence level and not significant for clearly present cases. There were no significant differences between the sexes in the occurrence of medial-lateral bowing of the lower limbs. Only one individual in the First African Baptist Church sample and a few individuals interred in the Cedar Grove Baptist Church cemetery (Rose and Santeford 1985b) were diagnosed with rickets. By contrast, rickets was quite common in the Catoctin Furnace sample, "where 50 percent of females and 75 percent of males exhibited tibial bowing (Kelly and Angel 1987:206)" (Null et al. 2009:195). Although differences in measurement could play a role, Null et al. (2009) suggest that vitamin D deficiency was more common in the Catoctin Furnace sample than it was for individuals interred in the New York African Burial Ground.

Gastrointestinal parasite infections can interfere with vitamin B_{12} absorption or deplete vitamin B_{12} reserves, leading to megaloblastic anemia. *Diphyllobothrium latum*, for instance, a tapeworm often found in salmon and whitefish, has an affinity for vitamin B_{12}, and infection can cause extreme anemia (Reinhard 2000:393). Unsanitary living conditions can cause diarrheal disease, which can deplete "B-complex vitamins, vitamin C, vitamin E, selenium, and iron," and thus has the potential to cause porotic hyperostosis or cribra orbitalia (Walker et al. 2009:115, citing Long et al. 2007).

As Reinhard (2000) has observed, the pork consumed by many New Yorkers was host to *Trichinella spiralis* (roundworm) and *Taenia solium* (tapeworm). Some fish also carry tapeworm infestations. Animals and the lack of sanitary conditions in the urban setting furthered the spread of parasitic infections. Analysis of nineteenth-century privy sediments from Five Points, an infamous neighborhood centered on the intersection of Park, Worth, and Baxter Streets, demonstrated that the residents were infected with *Trichuris trichiura* (whipworm), *Ascaris lumbricoides* (giant roundworm), *Entaris vermicularis* (pinworm), and a few other unknown species. No beef or pork tapeworms were found, which Reinhard (2000:402) related to thorough cooking. Given these findings and what is known of sanitation in early New York City, it can be expected that at least some New York African Burial Ground individuals were affected with intestinal parasites, although a study of 20 soil samples collected from the pelvic and stomach areas of burials produced negative results. Given the expected prevalence of parasites in colonial New York, the absence of parasitic ova in New York African Burial Ground samples probably relates to the nature of the samples that were taken, factors of preservation, or both.

Anemia caused by a discrete genetic trait is called hereditary hemolytic anemia (Angel 1964, 1966, 1967; Goodman and Martin 2002; Mensforth et al. 1978; Zaino 1967). Null et al. (2009) argue that genetic anemia, such as sickle-cell anemia, should be rare in the New York African Burial Ground population. Although sickle-cell anemia developed in Africa as an evolutionary response to malarial infection (e.g., Kwiatkowski 2005), sickle-cell anemia occurs at a rate of only 2–3 percent in Afro-Caribbean and West African populations (Serjeant 1981). Null et al. (2009) posit that survival past adolescence would have been rare for affected individuals without access to modern medical care. High mortality would hold for individuals homozygous for the mutated allele (HbA/HbS), known as sickle-cell trait, who suffer from full sickle-cell anemia and rarely live beyond adolescence. Individuals that are heterozygous for the sickle-cell trait have a low level of anemia and a greatly reduced chance of malaria infection (Kwiatkowski 2005). The disease could have persisted at low frequencies in the heterozygous state among African-descended populations. Some of the infants interred in the New York African Burial Ground, particularly those temporally placed in the Early Group, may represent homozygous individuals who succumbed to the disease.

Some of the questions regarding the causes of porotic hyperostosis among enslaved laborers could potentially be addressed with stable carbon isotope and nitrogen isotope analyses (Ezzo 1993; van der Merwe and Vogel 1978), which the researchers had planned but were unable to conduct (Blakey, Mack, Shuuja, et al. 2009; Goodman et al. 2009:102). Using the $^{13}C/^{12}C$ mass ratio in the organic fraction of bone, analysts can discern between the photosynthetic pathways used by the plants that were consumed. The

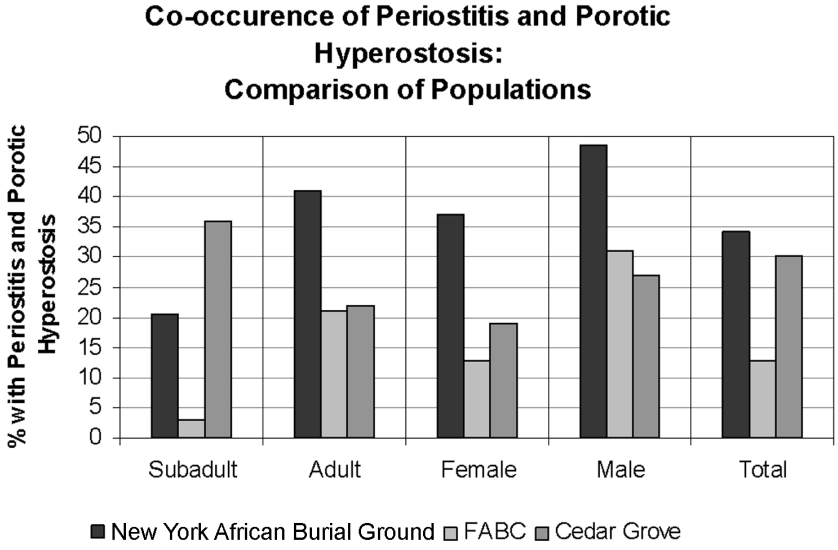


Figure 58. Co-occurrence of periostitis and porotic hyperostosis: comparison of populations (from Volume 1, Part 1 [Null et al. 2009:Figure 106]).

C_3-pathway plants, which include most temperate-region plants in North America and western Europe except certain grasses and desert species, differ from the C_4 plants (O'Leary 1981). Important cultivated C_3 plants include rice, manioc, wheat, oats, rye, and barley, along with the majority of fruits and vegetables. Plants that use the C_4 photosynthetic pathway are primarily tropical and include maize, millet, sorghum, and sugar cane—all foods that were consumed to varying degrees in Africa and the Americas. Eating large quantities of seafood leads to more positive ^{13}C values (Cox et al. 2001). When used along with $^{13}C/^{12}C$, the $^{15}N/^{14}N$ ratio can discriminate marine, terrestrial-meat, and plant protein contributions to the diet (Krueger 1985; Schoeninger et al. 1983; Sullivan and Krueger 1981). Such analyses may allow researchers to determine the contributions of seafood and terrestrial meat to the diets of individuals buried in the New York African Burial Ground, a particularly important question given New York's function as a port city and the apparent role of vitamin B_{12} deficiency in the development of porotic hyperostosis and cribra orbitalia.

Interaction of Nutritional Deficiency and Infectious Disease

Null et al. (2009) combined data on periostitis and porotic hyperostosis to investigate potential interactions between nutritional stress and infectious disease. A total of 275 individuals could be assessed for both conditions. Large numbers of New York African Burial Ground individuals displayed both conditions; 94 of 275 individuals (34.2 percent) had both porotic hyperostosis and periostitis. Further, nearly three-quarters of 130 individuals with porotic hyperostosis also had periostitis. New York African Burial Ground adults exhibited both conditions much more often than Cedar Grove Baptist Church and First African Baptist Church adults (Figure 58). Cedar Grove subadults, however, exhibited both conditions more often than in the other two samples of subadults. First African Baptist Church subadults rarely exhibited both conditions. High rates of both conditions in New York African Burial Ground adults suggest that the conditions leading to periostitis and porotic hyperostosis interacted more in New York African Burial Ground adults than the two conditions interacted among the other two adult samples. This could mean that unsanitary living conditions and gastrointestinal parasitic infections played a substantial role in depleting or preventing the absorption of essential nutrients in African New Yorkers who probably had already suffered from inadequate diets.

Subadult Growth and Development

In general, growth status is considered to be a function of nutritional status. Low growth status has a pronounced effect on quality of life and mortality (Allen 1984; Bogin 1988; Eveleth and Tanner 1990; Goodman and Martin 2002; McLaren 1976; Sinclair 1998; Sutphen 1985; Tanner 1978). Subadults with compromised nutritional status can have subnormal growth in height, weight, or robustness. Total calories,

protein, zinc, and vitamin A consumption are important nutritional factors that commonly affect growth status. Growth status is most often evaluated using measures of stature or weight. Other measures include circumference of the arm, trunk, or head, skin-fold thickness, or ratios of multiple growth indicators, such as height to weight (Goodman and Martin 2002).

Examination of growth status in adults or subadults indicates different aspects of growth and development. Subadult-growth status is a measure of recent growth conditions, whereas adult-growth status is a cumulative indicator of more long-term conditions. Low adult-growth status can indicate chronic growth dampening. Genovés (1967), for instance, found a correspondence between adult female stature and subsistence patterns in prehistoric skeletal samples from Mesoamerica and the U.S. Southwest. Studies of subadult-growth status are considered particularly valuable to the identification of catch-up growth following periods of compromised growth (Bogin 1988).

Drawing on a number of recent reviews (Hoppa and Fitzgerald 1999; Johnston and Zimmer 1989; Saunders 2000), Goodman and Martin (2002) list six limitations for studying variation in the subadult growth status using skeletal samples: (1) small sample sizes due to low mortality between the ages of 5 and 16; (2) problems in measuring bones with or without epiphyses; (3) problems of selective mortality and population instability (Wood et al. 1992); (4) unknown relationships between growth status and dental-age assessments; (5) inability to sex subadults, precluding comparison of boys and girls; and (6) the fact that only one longitudinal study of subadult long-bone growth is currently available (Maresh 1955). Although a number of these limitations complicate interpretation, the New York African Burial Ground sample is comparatively large, unlike other studies. Also, if the researchers in the future are able to molecularly sex all individuals as planned (see Chapter 4), other problems could also be mitigated.

Subadult Growth Status at the New York African Burial Ground

Goode-Null et al. (2009) evaluated subadult growth and development among New York African Burial Ground individuals by examining patterns in the growth status of subadults and young adults. Because skeletal growth typically is complete by 21 years for males and 18 years for females, Goode-Null et al. (2009) selected a sample of 194 age-assessed individuals under the age of 25 years that were represented by postcranial remains. Different age-assessment techniques were used to assign ages, depending on age groups. Goode-Null et al. (2009:228) used dental ages for infants and younger subadults owing to the relatively high correlation between dental and chronological age in infants and younger subadults (Demirjian 1986; Lewis and Garn 1960; Smith 1991). For older subadults and adults, Goode-Null et al. (2009) used pelvic-age assessment or a combination of two age-assessment methods when pelvic-age assessments were unavailable.

To evaluate growth status, Goode-Null et al. (2009) used standardized long-bone measurements (Goode et al. 1993; Sciulli 1994) and stature estimation. Standardized long-bone measurements were estimated by dividing long-bone diaphyseal lengths by age-appropriate growth standards for long-bone diaphyseal lengths (Maresh 1970) to obtain the proportion δl. The standard used, and originally reported by Maresh in 1970 (see also Scheuer and Black 2000), is based on data collected between 1930 and 1967 for the only longitudinal growth study currently available, a "long-bone data series collected by the Child Research Council, of Denver, Colorado, on living children" (Goode-Null et al. 2009:229). The data series corresponds to 123 males and 121 females who were measured from birth to at least 18 years of age. The study participants were predominantly middle- to upper-class Euroamerican children living in a high-altitude environment.

When more than one long bone from an individual could be measured, Goode-Null et al. (2009) took the average to obtain δl_{mean}. Sciulli (1994) found that the proportion δl was influenced strongly by which long bones contributed to composite measurements. The radius and the ulna, for instance, have slower growth rates than the tibia and the fibula. When compared to the Maresh (1970) standards, long-bone growth rates tend to follow a rank-size order of femur, tibia, fibula, humerus, radius, and ulna. Sciulli (1994) concluded that the fastest-growing long bones were likely the most sensitive to stress.

Indeed, in the New York African Burial Ground sample, the lowest values for the proportion δl were obtained on the femur, tibia, and fibula. Most δl_{mean} individual values (35 of 48, or 73 percent) were below one. Thirty-eight of 48 individuals (79.2 percent) had δl_{mean} values above 0.9. To Goode-Null et al. (2009), the fact that most individuals had δl_{mean} proportions between 0.9 and 1.0 indicates adequate, although suboptimal, nutrition. Of course, the results could

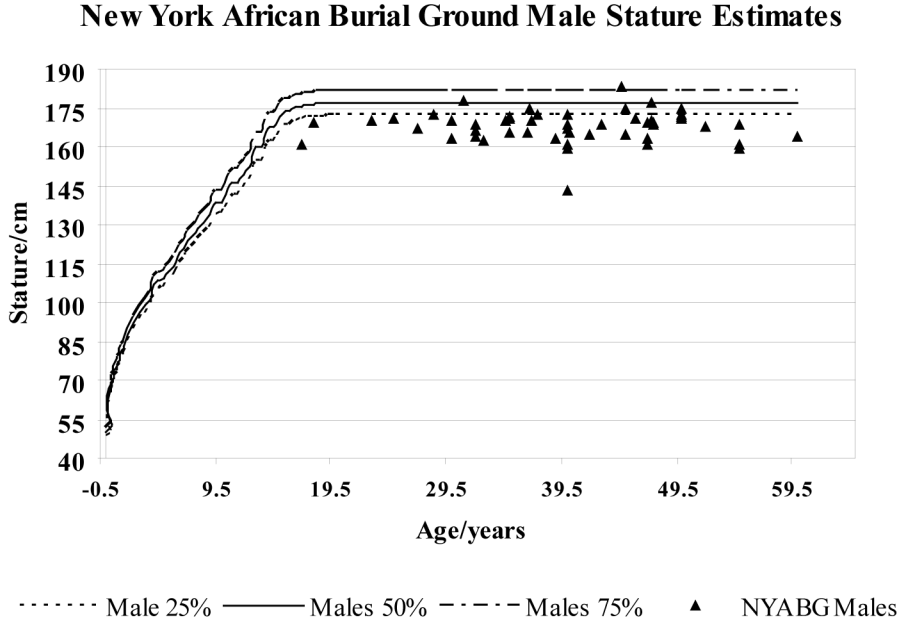


Figure 59. New York African Burial Ground stature estimates: males (from Volume 1, Part 1 [Goode-Null et al. 2009:Figure 135]).

differ if they were based on standards derived from other populations with different genetic heritages and exposed to different health hazards.

Stature was estimated using regression formulas developed by Trotter (1970; cf. Ubelaker 1989) for African American males and females (Goode-Null et al. 2009:224). Stature for fetal and neonatal individuals was estimated using Fazekas and Kośa's (1978) regression formulae. Sex-specific formulae were used for sexed individuals and composite regression formulae were used for individuals who could not be sexed. Stature estimates were then compared against the Centers for Disease Control (CDC) and the National Center for Health Statistics (NCHS) growth standards.

Stature estimates were made on 54 males, 34 females, and 41 individuals (mainly subadults) of indeterminate sex. Stature estimates were then compared to the twenty-fifth, fiftieth, and seventy-fifth percentiles of CDC/NCHS growth standards. Almost all males were below the fiftieth percentile, and many were well below the twenty-fifth percentile (Figure 59). Females were also typically below the fiftieth or twenty-fifth percentiles, but almost one-third were close to or above the fiftieth percentile (Figure 60). Subadults who could not be sexed were typically below the fiftieth percentile of the CDC/NCHS growth standards for males or females (Figure 61). Preliminarily, stature estimates suggest that females had a better overall state of health than males, but Goode-Null et al. (2009) cautiously point out that selective mortality could skew the picture. From the seventeenth and eighteenth centuries to modern times, stature generally increased for many populations as knowledge of diet and nutrition became more widespread and improved medical care became more available. Because the CDC/NCHS standards were based on more-recent populations, the significance of the difference between New York African Burial Ground individuals and CDC/NCHS reference population is difficult to assess without reference to other Colonial period samples.

Goode-Null et al. (2009) examined rates of porotic hyperostosis (cranial and orbital), infectious lesions, abnormal long-bone shape (flattening, bowing, or flaring), craniosynostosis (premature fusion of the sutures of the skull), and indicators of biomechanical stress to test their effects on growth status and found "neither nutritional, generalized health, nor biomechanical indicators of environmental stressors were associated with low δl_{mean} values" (Goode-Null et al. 2009:247). Goode-Null et al. (2009) also compared the New York African Burial Ground results to Sciulli's (1994) results on five prehistoric Native America populations in the Ohio River Valley dating between A.D. 1000 and 1700. New York African Burial Ground individuals had some of the highest proportion values, possibly

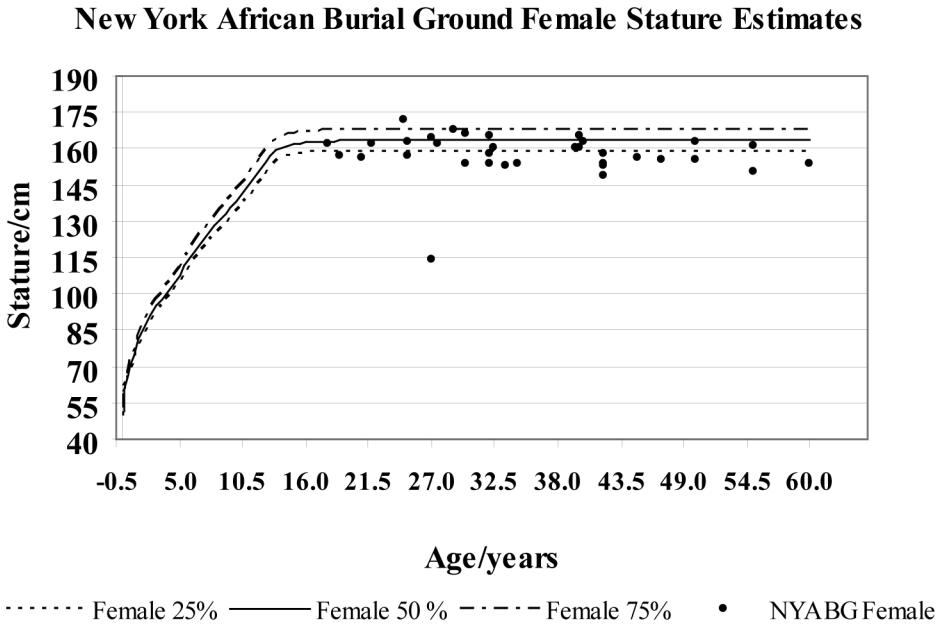


Figure 60. New York African Burial Ground stature estimates: females (from Volume 1, Part 1 [Goode-Null et al. 2009:Figure 136]).

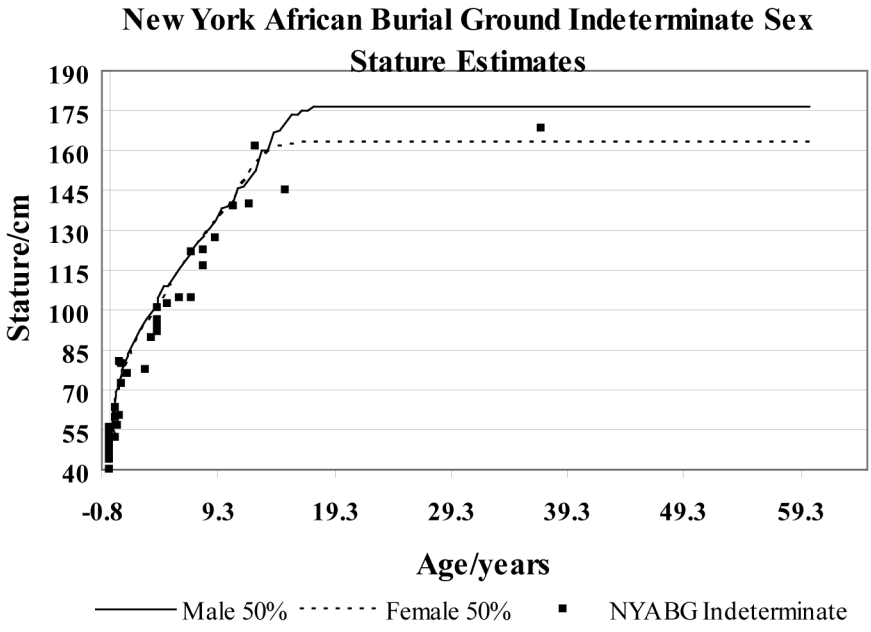


Figure 61. New York African Burial Ground Stature estimates: subadults (from Volume 1, Part 1 [Goode-Null et al. 2009:Figure 137]).

indicating that their growth status was somewhat better than some late prehistoric Native Americans of the Ohio River Valley.

In addition, Goode-Null et al. (2009) compared stature estimates of New York African Burial Ground individuals to stature estimates obtained by Steckel (1996) using ship manifests for vessels that supplied the southern United States with enslaved laborers between 1820 and 1860. Steckel provides stature estimates for enslaved males and females between

the ages of 4.5 and 25 years. There were no significant differences between Steckel's (1996) estimates and Goode-Null et al.'s (2009) estimates for either subadults or adults. Goode-Null et al. (2009:251) conclude that "(1) enslavement was equally detrimental to the health of individuals (as reflected by growth status) in the North and in the South, and (2) the regression formula used to estimate stature for the New York African Burial Ground juvenile remains provides an accurate reflection of the growth status of these individuals."

Conclusions

The researchers developed several major conclusions regarding daily life that are related to diet, nutrition, and disease. The people buried in the New York African Burial Ground suffered from a number of nutritional deficiencies and diseases that left observable effects on their teeth and bones. Children were particularly stressed, and the timing of enslavement appears to have been a major factor that contributed to the development of dental and skeletal pathologies.

Dental enamel hypoplasias were observed at higher rates than for other enslaved eighteenth-century populations but lower than enslaved and free African nineteenth-century populations. High frequencies of individuals with hypoplasias probably correspond to acute malnutrition and widespread infectious diseases, such as diarrhea, conjunctivitis, the common cold, influenza, and the many childhood diseases from which the population presumably suffered. New York African Burial Ground males were more frequently affected by hypoplasias than females. The longer an individual lived, the less likely he or she was to have hypoplasias. The researchers suggest that hypoplasias and the conditions that produced them were more severe for individuals born enslaved in New York or who were enslaved at a young age. High incidences of third-molar hypoplasias among individuals who died between the ages of 15 and 24 and low rates among individuals aged 25 and older suggest to the researchers that stresses associated with the Middle Passage were responsible, given that many young adults were forcibly migrated between the ages of 9 and 16. More than 60 percent of children below age 15 had dental enamel hypocalcification, a condition caused by physiological stress. Dental caries were frequent, particularly among females.

The high incidences of porotic hyperostosis and cribra orbitalia indicate that many individuals likely suffered from nutritional deficiencies, which may have also been complicated by gastrointestinal infection. Periostitis was also common, indicating that many enslaved individuals, particularly males, suffered from infections. The researchers discovered that conditions resulting in porotic hyperostosis and periostitis may have interacted to a greater degree than that noted for other populations, suggesting that the unsanitary living conditions and poor diets probably diminished the health status of many African New Yorkers.

The researchers also discovered a high incidence of treponemal infection. Treponemal infection as evidenced by saber shin and other indicators was observed in 40 individuals, 16.1 percent of those who could be assessed. All of these were more than 15 years of age, and most were male, around 80 percent. The researchers attributed treponemal infections to yaws and congenital syphilis. Venereal syphilis could have been prevalent among enslaved laborers imported from the West Indies but only 2 individuals had possible indicators of venereal syphilis. Infected children would have likely suffered greatly and may not have survived past a young age. The New York African Burial Ground evidence regarding treponemal infection may be important to understanding the social implications of syphilis for enslaved populations as well as the origins of the disease.

In addition to poor nutrition and high disease loads, individuals born in New York had unexpectedly high levels of lead in their teeth. Maternal contributions during breast-feeding may have been especially important to elevated lead levels. High lead levels were an additional stressor that would have negatively interacted with other dietary conditions. Low levels of calcium in diets, for instance, could have increased the uptake of lead, and higher lead levels could have contributed to iron-deficiency anemia and many other health problems.

The overall effects of poor nutrition, disease, and environmental hazards probably dampened subadult growth and development. Subadult stature was clearly suboptimal in comparison to modern growth standards and was comparable to the historically recorded stature of enslaved Africans imported into the southern United States between 1820 and 1860. The lack of standards for populations contemporaneous with the New York African Burial Ground population or standards corresponding to different genetic and environmental factors, however, makes it difficult

to assess the degree to which the conditions of daily life dampened growth and development for enslaved individuals.

Historical evidence suggests that enslaved Africans, through birth or forcible migration, arrived in New York in a compromised state of health that was further diminished by conditions in New York. The diets of enslaved Africans in New York City during the period that the African Burial Ground was in use were nutritionally deficient, as they were based on maize and little else of nutritional value. Enslaved Africans may have had inadequate amounts of animal foods and went through periods of the year without fresh fruits and vegetables. Nutritional deficiencies may have been further worsened by lactose intolerance, limited vitamin D production, lead consumption, and parasitic infections. Enslaved Africans lived in cramped, dark, and moist spaces where diseases could spread. Unsanitary living conditions would have led to parasitic infections and diarrheal illness. Also common were outbreaks of smallpox, yellow fever, measles, and other diseases (Goodfriend 1992:280).

To conclude, historical and bioarchaeological studies of the New York African Burial Ground provide information on the life histories of people who suffered short lives under brutal conditions. Disease, poor nutrition, unhealthy living conditions, and heavy workloads combined to create a population under tremendous physiological stress. Children were especially stressed and probably frequently succumbed to diseases such as the common cold, conjunctivitis, and diarrhea. The researchers infer that the timing of many pathologies coincided with the timing of enslavement, suggesting that some of the highly stressed living conditions experienced by the deceased were largely the result of their enslavement (Blakey, Mack, Barrett, et al. 2009). Building on this body of information, further research may contribute substantially to understanding the etiologies of specific pathologies and their relationship to the conditions of enslavement.

Chapter 6

Forcible Labor and its Effects on Family Life and Mortality

Forcible Labor and Its Effects

A major goal of the New York African Burial Ground research was to uncover and document the physical effects of forcible labor on enslaved laborers and the effects of enslavement on family life and demography. The researchers examined historical evidence for labor, family life, and reproduction in West and West Central Africa, the West Indies, and New York; evaluated archaeological evidence for family ties at the New York African Burial Ground; and evaluated New York African Burial Ground individuals for paleodemographic information on fertility and mortality and osteological evidence of work-related stress. Historical information showed that different kinds of work were performed by New York African men, women, and children, but all forcible labor was strenuous.

In light of historical information, osteological information provided an overall picture of the effects of enforced labor on the health and quality of life for those interred at the New York African Burial Ground. Through analysis of patterns in the occurrence of osteoarthritis, osteophytosis, Schmorl's nodes, spondylolysis, and musculoskeletal stress markers, the researchers discovered that many tasks that enslaved laborers performed involved excessive physical stresses for which they paid serious biological costs. In all likelihood, the detrimental effects of forcible labor, combined with a poor diet and disease processes (discussed in Chapter 5), had a devastating impact on the health of enslaved individuals.

Through evaluation of historical and bioarchaeological information, the researchers also revealed that enslavement had a devastating effect on family life and procreation and that kinship and social relations in New York strongly contrasted with kinship and social relations in Africa. The oppressive conditions of enslavement, including the negative attitudes enslavers had toward interaction and childbearing among enslaved Africans, disrupted and interfered with family life, procreation, and child rearing. Through paleodemographic reconstruction using historical records, mortality profiles, and life expectancy tables, the researchers further showed that life expectancy was low, child mortality was high, and the population of enslaved laborers likely grew as a result of in-migration rather than fertility. Nevertheless, archaeological information developed by the researchers regarding demographic patterning in burial locations, in the use of grave markers, and in the inclusion of jewelry and other personal objects in some burials suggests that enslaved Africans continually strove to maintain family ties in life and in death, despite enslavement.

Labor in West and West Central Africa

Many enslaved laborers came originally from parts of West or West Central Africa, often by way of the West Indies. They were thus exposed to labor patterns in West and West Central Africa and, to varying degrees, in the West Indies as well. Enslaved Africans would not have been strangers to hard labor, nor to diverse agricultural, craft working, or industrial tasks. As Medford, Brown, Heywood, et al. (2009b:15) note, enslaved Africans would have been accustomed to "clearing land in the forests, building and repairing houses, and providing porterage for the transport of salt and iron (ubiquitous at many of the regional markets) or other commodities in production centers. Some of them may have also engaged in a variety of artisan or craft work, including cloth weaving." Likewise, because of long-standing metallurgical traditions in Africa, some enslaved Africans were particularly skillful in working with metals. Bosman (1721 [1705]:109),

for instance, described blacksmiths in the Gold Coast region as making all manner of tools, including "all sorts of War-arms . . . as well as whatever is required in their Agriculture or House-keeping" using tongs, anvils, bellows, and pipes in their art. These enslaved Africans may have been especially useful to managers who needed and recognized these skills (Alpern 2005; DeCorse 2001a). Africans in colonial New York practiced some metallurgy and were valued as blacksmiths, for instance (Medford 2009:xix; Medford, Brown, Carrington, et al. 2009c:55).

In both New York and West and West Central Africa, African laborers often worked as porters. They carried huge loads that would have placed excessive stress on the spine (Medford, Brown, Carrington, et al. 2009b:89, 2009c:58). The lower back was highly affected by the lifting and carrying of heavy loads, but the neck and shoulders were also stressed because of the way loads were carried. In the late-seventeenth century, Bosman (1721 [1705]:319) noted that porters along the Bight of Benin of West Africa were frequently employed in carrying goods from the shore to principal villages: "With a burthen of one hundred pounds on their head they run a sort of continual trot; which is so swift that we Hollanders cannot keep up with them without difficulty, though not loaded with an ounce of weight." Large groups of porters in late-eighteenth-century Sierra Leone were observed to carry similar loads:

> We passed at least 300 Fulahs going to Kocundy, most of them however being heavy laden took but little notice of us. We now say their manner of traveling with their heavy burdens, some of which I am told equal 3Cwt. [hundredweight], though rather I doubt it. Many of them however carry more than ½ that quantity which is certainly a great load to travel with. These loads consist mainly of rice which they carry to Kocundy and for which they take salt in return. Their loads are made up in a kind of long basket, from 5 to 7 feet in length and from 9 inches to a foot broad, the lower part of which comes as far down as their rump, the upper part 4 or 5 feet above their heads. This they kept steady by means of their bow which is fastened to the top of it, so that the whole weight rests upon the shoulders [Watt 1994:8].

Agriculture was a common pursuit for seventeenth- and eighteenth-century West Africans, many of whom "cultivated cereal grains such as millet and maize, grew peanuts, and harvested rice along the coastal areas and river valleys" (Medford, Brown, Carrington, et al. 2009c:51). In Sierra Leone, for instance, people cultivated "maize, or Indian corn, millet, and yams," rice, plantains, Guinea corn, ground nuts, sweet potatoes, and cassava (Winterbottom 1969 [1803]:55). They also extracted palm oil and made palm wine (Winterbottom 1969 [1803]:58). Planting and hoeing with short-handled hoes and building and maintaining water-management facilities were frequent activities that often placed stress on the lower back. In the Kongo region and in Sierra Leone, many agricultural tasks were performed by women, who were the primary planters and tenders of agricultural crops (Medford, Brown, Heywood, et al. 2009b:16) (Figure 62). In other contexts, such as on Portuguese-owned plantations (*arimos*) in the Bengo region, men worked agricultural fields as members of labor gangs (Medford, Brown, Carrington, et al. 2009c:53; Watt 1994:22). In 1794, Watt (1994:22) noted that among the Fula in Sierra Leone, "the women were employed every where in hoeing the ground which on account of its extreme dryness was very hard . . . . The men are chiefly occupied in carrying their produce to Kocundy and fetching salt from thence in return, so that neither sex is idle."

In addition to agricultural tasks, women in seventeenth- and eighteenth-century West Africa were accustomed to extracting salt, gathering fruits for domestic consumption, making pottery, and child rearing (Medford, Brown, Carrington, et al. 2009c:53). DeCorse (2001a:118) has noted that the production of pottery was primarily a woman's task, and individuals and entire villages might be specialized in this craft. Depending on the region, many other activities were also performed by men and women. In the Bight of Benin region, common manufacturing activities included "spinning of Cotton, weaving of fine Cloaths, making of Calabasses, wooden Vessels, Assagayes [or throwing spears] and Smiths-ware; and several other Handicrafts" (Bosman 1721 [1705]:318). Gold mining, iron mining, and cloth making were common industries in the Senegambia region. Africans in Sierra Leone worked in the logging industry to supply European demand for African sandalwood or camwood (*Baphia nitida*), a wood prized for its red dye. They also cleared land for agriculture. According to Winterbottom (1969 [1803]:46), "the greatest fatigue [agriculturists in Sierra Leone] undergo is in clearing the ground, which is done by merely cutting down the trees . . . the whole is set on fire, and the ground is thus rendered as clear as the flames can make it." The Akan speakers of the Gold Coast region practiced forest clearing for agriculture and gold

Figure 62. Kongo woman laboring in agricultural field (courtesy of University of Arizona Special Collections, from *Relation historique de l'Ethiopie occidentale; contenant la description des royaumes de Congo, Angolle et Matamba,* by Giovanni Cavazzi, 1732) (from Volume 3: [Medford, Brown, Heywood, et al. 2009b:Figure 6]).

mining. Gold was extracted by digging prospect pits in the hills where gold was suspected, by searching rivers and waterfalls, "whose violence washeth down great quantities of earth, which carry the Gold" and by panning at the seashore, "where there are little branches or rivulets into which the gold is driven from mountainous places" (Bosman 1721 [1705]:71).

Cattle raising was common in West Africa. In some contexts, such as among the Fulbe in Senegambia, cattle were raised by specialists. In other cases, farmers raised their own cattle. People from Matamba and Angola, particularly Angolan Imbundus, were heavily involved in cattle raising (Medford, Brown, Carrington, et al. 2009c:51, 53).

People living in coastal areas of the Bight of Benin were accustomed to fishing and boat building (Medford, Brown, Carrington, et al. 2009c:51). Fishing was also a major activity in the Matamba region. Fishermen fished from canoes that were propelled by "Paddles made like a Spade, having a handle about the same Length; with which paddling the Water with an under-hand stroke, they keep the *Canoa* in a very swift Course" (Bosman 1721 [1705]:110). In eastern West Central Africa, "securing ivory, beeswax harvesting, copper and iron ore mining, and production of iron goods" were common activities (Medford, Brown, Carrington, et al. 2009c:53).

Raiding and warfare was commonplace in West and West Central Africa, as Africans and Europeans fought for control of people and resources. As such, men in West and West Central Africa were accustomed to fighting in wars. Men fought for different African polities and states, as allies or enslaved soldiers of the Portuguese, and as members of raiding parties. As allies of the Portuguese, Mbundu gathered African soldiers as tribute (*guerra preta*). The Imbangala, militaristic bands originally from south of the Kwanza River, were frequently involved in raiding and warfare (Thornton 1992, 1999, 2003). The Portuguese enslaved thousands of Africans for use as soldiers. In the mid-seventeenth century, for instance, Manoel Correia Leitão reported 200,000 soldiers in Kasanje and its vassal states (Medford, Brown, Carrington, et al. 2009c:53).

Widespread warfare meant that many enslaved African males forcibly migrated from West and West Central Africa were accustomed to soldiering, and many people were originally enslaved as prisoners of war. Many enslaved Africans were taken in war with neighboring countries or as a consequence of civil war (Thornton 1992:99–100, 1999:128). In fact, it is believed that Africans with experience in guerrilla warfare, such as Akan peoples, led a number of enslaved-African rebellions in the Americas (Dodson et al. 2000; Frohne 2002; Harris 2003). Many Africans captured through warfare were sold to Muslim or European traders. Some wars were initiated solely to acquire enslaved Africans to use as capital to pay off political or commercial debits (Thornton 1992:101–102). The Sudanese armies and those of many other states relied heavily on enslaved combatants and administrators. Enslaved Africans also were used by state officials to produce revenue and perform military and administrative services in the struggle for control among royalty and the elite.

The complex societies of the African kingdoms were known for specialization in crafts, commercial production of many items, and widespread exchange in manufactured goods. Enslaved laborers were often involved in these trades and were the primary form of private investment and the manifestation of private wealth. Enslaved labor was also critical to agricultural production, mining, and trade, as laborers carried goods on commercial expeditions (Thornton 1992:90).

Labor in the West Indies

Enslaved Africans imported into New York may have spent anywhere from days to years laboring on West Indian plantations. These laborers were frequently acquired through the provisions trade as partial payment for goods supplied to West Indian planters. Provisions were comparatively expensive in the West Indies. Enslaved laborers that were difficult to control, superannuated, or found guilty of crimes such as revolt were traded off the islands to places like New York, especially during lean years (Burnside 1997:143). Sugar-cane production—an especially grueling, exploitative, and dangerous form of plantation agriculture—was the major focus of West Indian plantation economies. Enslaved laborers on West Indian plantations typically worked from sunrise until sunset, performing exhausting, physically strenuous tasks, including cutting cane, carrying it to the mills, and making sugar. Enslaved Africans also weeded the fields, planted food crops such as maize, and gathered cane waste materials for fuel and thatching material (Handler and Lange 1978; Medford, Brown, Carrington, et al. 2009c:53–54.). One especially repetitive and grueling activity, cane-hole digging, required enslaved laborers to dig as many as 120 (2-by-2-by-2-foot) holes per day in ploughed fields and as many as 90 holes per day in unploughed fields (Higman 1995:164). Enslaved African also maintained the windmills and other equipment, labored in sugar and rum manufacture, gathered livestock feed, and tended livestock and poultry, among other chores (Handler and Lange 1978).

Many tasks required enslaved laborers to stoop frequently and carry heavy loads weighing between 80 and 100 pounds on their heads. Such tasks included carrying 80-pound baskets of manure to spread around plantings; filling and carrying heavy loads of trash; and cutting, baling, and carrying 100-pound bales of grass for plantation livestock (Carrington 2002). Men, women, and children performed these tasks, for which they suffered heavy physical tolls. During peak production times, enslaved laborers worked nonstop, sometimes without sleep (Medford, Brown, Carrington, et al. 2009c:54). It is not surprising that labor on West Indian plantations had negative impacts on the health status and quality of life for enslaved laborers. Younger children, the elderly and infirm, and permanently disabled laborers who did not work constituted some 18–25 percent of Newton Plantation's enslaved laborers (Handler and Lange 1978). They were given tasks that they could perform, but many old and infirm enslaved laborers who had labored in the West Indies were shipped to places like New York, where they were put to domestic work rather than agricultural labor.

Labor in New Amsterdam and New York

As discussed in Chapter 3, enslaved laborers were first brought to New Amsterdam shortly after its founding in 1624. New Amsterdam began as a trading post of the fur trade, and few colonists were interested in producing food for the colony (Goodfriend 1978:127; Rothschild 1990:88). The arrival of the first 11 male enslaved laborers in 1625 and 1626, followed by 3 females a few years later, was a small, but significant, boost in the settlement's labor economy. Their forcible labor was essential to building and maintaining the settlement (Medford, Brown, Heywood, et al. 2009a:6, 2009b:15). As the settlement grew, Dutch West India Company officials continued to recognize a serious need for labor in New Amsterdam that was not being filled by colonists. Although the West India Company leased land for farming to company officials and private individuals, the labor shortage was chronic. Getting Europeans to perform hard labor proved difficult (Foote 2004:36), and it was widely felt that a single enslaved African could perform more labor at a lower cost than multiple indentured servants. Their solution to the labor shortage was dual: (1) encourage more people to colonize New Amsterdam and (2) import more enslaved laborers.

The first enslaved laborers in New Amsterdam were instrumental in building the early infrastructure of New Amsterdam. Many activities performed by enslaved Africans in Dutch New Amsterdam probably centered on farming. Enslaved laborers held by the company were "routinely leased to private individuals" as farmhands (Medford, Brown, Heywood, et al. 2009b:16). Using implements made mostly of wood, enslaved laborers cleared land of trees, broke up the soil, and performed other farm tasks. The laborers also built roads and constructed buildings and earthworks (Swan 1993). Farmwork and construction tasks typically were performed by all-male gangs of enslaved Africans, who labored in the city as well as in farms outside the city. Enslaved women, by contrast, were more often put to domestic tasks, "performing all manner of household chores and taking care of the owner's children" (Medford, Brown, Heywood, et al. 2009b:16). The agricultural skills of African women, however, may have also been put to use, given the crucial role that women in Africa fulfilled in agriculture (Medford, Brown, Carrington, et al. 2009c).

Less than a decade after the arrival of the first enslaved Africans in New Amsterdam, the overseer, Jacob Stoffelsen, commented on the labor contributions of enslaved Africans. In a 1635 *Deposition Concerning the Erection of Fort Amsterdam and Other Work Done by the Company's Negroes*, Stoffelsen testified that enslaved labor was instrumental "in building Fort Amsterdam, which was completed in 1635 . . . in cutting building timber and firewood for the Large House as well as the guardhouse, splitting palisades, clearing land, burning lime and helping to bring in the company's grain in harvest time, together with many other labors" (quoted in Medford, Brown, Heywood, et al. 2009b:15). The "other labors" included military service against Native American attacks, the building of a road between New Amsterdam and Haarlem, sanitation, and cultivation (Medford, Brown, Heywood, et al. 2009b:15; Swan 1998a). In 1641, the Dutch governor of New Amsterdam informed the heads of settler families that he would use "the strongest and fleetest Negroes" to fight the Native Americans with hatchets and the half pike, and Peter Stuyvesant requested in 1658 that the West India Company send "clever and strong Negroes" to work and fight Native Americans (cited in Thornton 1992:150). In general, Dutch treatment of enslaved laborers is considered to have been more humane than British treatment, but Africans were still treated differently under the Dutch than European servants. For instance, Europeans guilty of offenses in Dutch New Amsterdam were sometimes ordered as punishment to work alongside Africans, suggesting that tasks intended for enslaved Africans were more demeaning or arduous than those typically allocated to Europeans (Medford, ed. 2009).

When the English took over New Amsterdam in 1664, the population was about 1,500, a figure that probably excluded the approximately 300 enslaved laborers and 75 free Africans in the settlement (Goodfriend 1992:13). As the economy of New York diversified and developed and the settlement was transformed from one "possessing a distinctly rural character" to a large and more populous urban context, enslaved labor became essential to many developing industries (Medford, Brown, Carrington et al. 2009c:55). Tasks performed by enslaved Africans ranged from the demeaning and excessively arduous to the skilled and lucrative. As the colony grew into a commercial center under the British, enslaved laborers made a handsome contribution to skilled trade work. During the late-seventeenth and eighteenth centuries, enslaved Africans performed a broad array of activities as farmhands, mariners, bakers, brewers, tanners, millers, chimney sweeps, washerwomen, street vendors, dockworkers, and domestics. They worked in fisheries, industry, transportation, construction, and

shipping (Medford, Brown, Carrington, et al. 2009c; Wilczak et al. 2009:199). They labored in slaughterhouses north of the city, at docks and shipyards along the Hudson and East Rivers, on farms on the outskirts of town, and at shops and markets downtown (Figure 63). Enslaved men piloted market boats between the city and farms and crewed oceangoing vessels, including privateers and legitimate traders (Foote 2004:76; Medford, Brown, Carrington, et al. 2009c). Working as a sailor sometimes offered opportunities for freedom and profit (Foy 2006) (see Chapter 7).

Many enslaved African males were employed in tasks integrated with New York City's lucrative shipping industry and the provisions trade. As New York cornered the market on flour milling and bread production, New England colonies sent their grain to New York City for processing. New York City bolters and millers sifted and processed grain for bread, biscuits, beer, and export (Matson 1998). Shipwrights and other specialists often employed enslaved Africans in the many tasks involved with shipping—building and repairing ships, making rope (Figure 64), and crafting sails (Medford, Brown, Carrington, et al. 2009c:55, 59). Enslaved Africans also worked on ships as crew, to the extent that during the eighteenth century, almost 40 percent of sailors were of African descent (Foote 2004:201).

Enslaved Africans also contributed as skilled artisans in trades such as barbering, shoemaking, shipbuilding, goldsmithing, and blacksmithing (Wilson 1994). In 1703, households with enslaved laborers were involved in at least 30 different industries, from blacksmith to barber. At that time, households with enslaved laborers typically held between one and six enslaved laborers. Merchants, shipmasters, bolters, and brewers held the majority of enslaved laborers. Per household, more enslaved laborers were held by brewers, painters, bolters, carpenters, bricklayers, and merchants; other trades held fewer laborers on average (Medford, Brown, Carrington, et al. 2009c:Table 8; Rothschild 1990). Predominantly male labor was associated with the households of bolters, brewers, blacksmiths, shipwrights, coopers, bakers, cordwainers, and carpenters. Predominantly female labor was associated with the households of merchants, mariners, ship's masters, gentlemen, sailmakers, and attorneys. Individual enslaved laborers were quite versatile and often performed multiple tasks in diverse industries.

The comparatively low cost and high productivity of enslaved laborers threatened the livelihood of nonenslaved workers. As early as 1628, attempts were made to prohibit Africans from performing skilled trades when Euroamericans convinced the West India Company not to train enslaved Africans in skilled trades (Harris 2003). Three decades later, when skilled tradesmen were lacking, company directors proposed that Africans be taught skilled trades to make up the labor deficit. The proposal, however, was rejected by Governor Stuyvesant and the council, who countered that Africans in New Amsterdam were unfit to learn trades (Medford, Brown, Heywood, et al. 2009b:16). Official prohibitions give some indication of what people actually did as well as what activities the legally or politically empowered segments of the population perceived as a threat. In the 1680s and 1690s, for instance, the Common Council issued a series of ordinances that prevented Africans from working as cart men or porters. These tasks offered high pay for unskilled work, mobility, and some degree of self-empowerment (Medford, Brown, and Carrington 2009:27). If contemporaneous reports from West Africa are any indication (e.g., Bosman 1721 [1705]), Europeans may not have been able to compete with Africans in such tasks.

Few documents provide information about how enslaved laborers were treated in New Amsterdam and New York, but it might be assumed that during the British occupation, farm laborers were treated similarly to those who labored in the tobacco farms of Virginia. A Dutch traveler visiting there in 1679 observed that overseers demanded long hours, and when the enslaved laborers and indentured servants returned from the fields exhausted, they were forced to grind maize for their food (cited in Thornton 1992:169). Enslaved laborers who worked on farms also performed coopering and cordwaining and worked in the timber industry during the winter months. In New England, much enslaved labor was based on a task system. Once tasks were completed, some enslaved laborers were permitted to work for themselves (Piersen 1996). Some enslaved laborers were able to hire themselves out, and others struck deals with their enslavers to split the profits of enslaved labor (Foy 2006). In other cases, enslaved laborers pilfered profits or sold their own food or merchandise on the sly (Harris 2003; Medford, Brown, Carrington, et al. 2009c). The New York African Burial Ground history reseachers note that such activities were necessary to "materially enhance the quality of life not only for the men themselves, but for those to whom they felt responsible—wives, children, and other relatives—despite physical separation resulting from the patterns of slaveholdings" (Medford, Brown, Carrington, et al. 2009e:76).

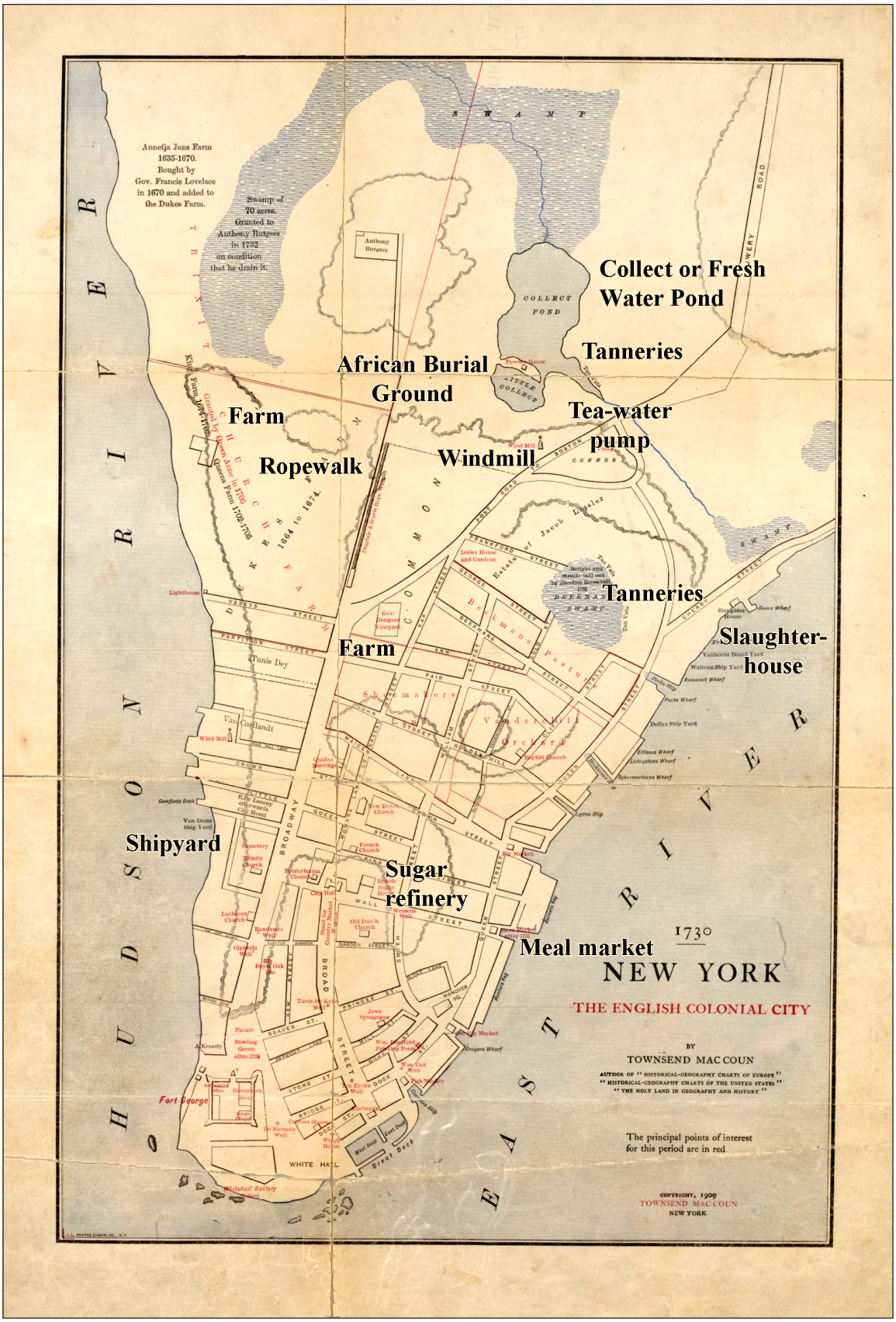


Figure 63. The 1730 Townsend MacCoun map with additional labels showing loci of forcible labor exploitation (adapted from the Townsend MacCoun Map, courtesy the New York Public Library Map Division) (from Volume 3 [Medford and Brown 2009b:Figure 1]).

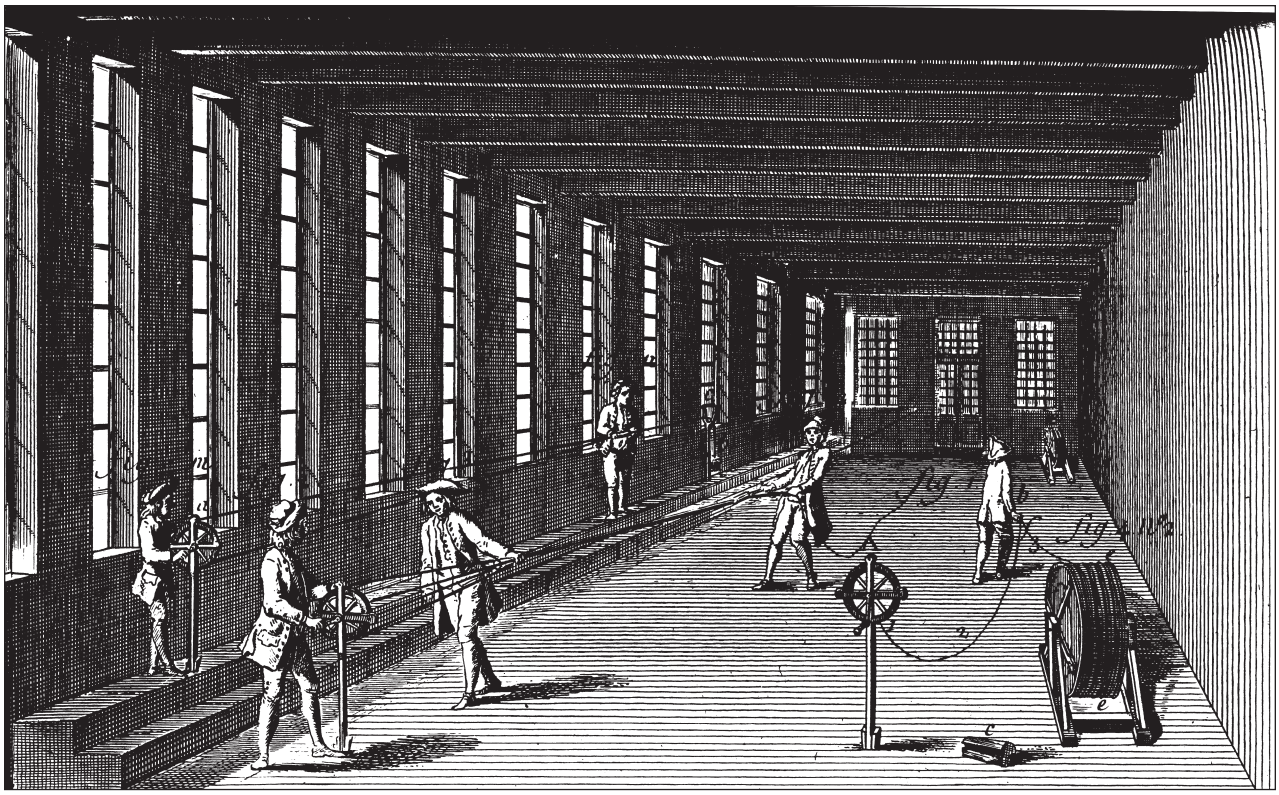


Figure 64. Ropewalk, a colonial industry where enslaved laborers worked (from Bridenbaugh 1950) (from Volume 3 [Medford, Brown, Carrington, et al. 2009c:Figure 14]).

Variation in Work among Men, Women, and Children

Enslaved African males were frequently employed as porters, dockworkers, and coopers. They performed dangerous and backbreaking tasks, moving cumbersome and heavy merchandise, often stored in hogsheads, to and from New York City docks (Bridenbaugh 1950; Foote 1991). Hogsheads—huge, standardized casks of liquid or food—held approximately 236 liters (62.3 U.S. gallons) of liquid. A fully packed tobacco hogshead weighed as much as 1,000 pounds. In the 1720s and 1730s, tobacco hogsheads would have been common, as New York merchants were heavily involved in converting tobacco from the southern colonies into value-added products for resale, such as snuff and chewing tobacco (Matson 1998).

By contrast, female enslaved laborers typically performed domestic chores associated with New York households. Beginning before dawn, the tasks of enslaved women included pumping and carrying water, "preserving and cooking food, caring for children, and cleaning house and laundering clothes as well as spinning, weaving, sewing, and brewing alcoholic beverages" (Medford, Brown, Carrington, et al. 2009c:61). In more-prosperous homes, enslaved African women prepared food in detached "Negro kitchens" that served double duty as their quarters (Figure 65). Food was cooked in large, cast-iron pots that, when filled with food, were hot, heavy, and difficult to move around (Medford, Brown, Carrington, et al. 2009c:61).

Both enslaved and free women commonly spun thread, sewed, weaved, and knitted. In addition to physically arranging threads, cloth making entailed dying and processing fabrics to make them more supple and wearable. Fabrics that were too inflexible to wear had to be soaked in soapy warm water and pounded (Medford, Brown, Carrington, et al. 2009c:62, citing Tryon 1917).

As in other colonies, enslaved children were no strangers to labor. Children as young as 6 were advertised for their labor and certainly could have been used at younger ages. Children between the ages of 9 and

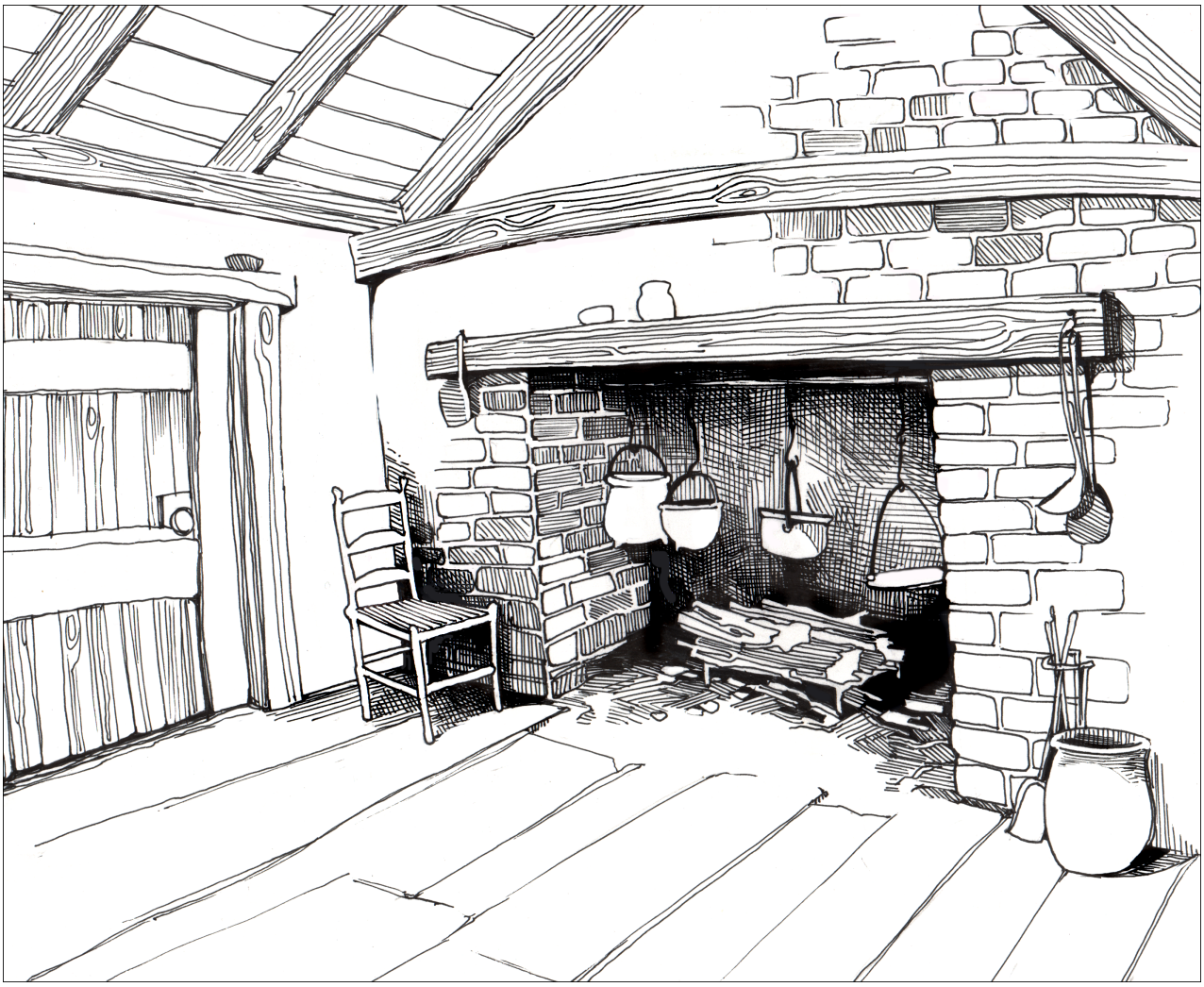


Figure 65. "Negro kitchen" common in colonial households. African families often resided in or near this area of the household (from Volume 3 [Medford, Brown, Carrington, et al. 2009c:Figure 15]).

12 were commonly offered for sale, particularly in the second half of the eighteenth century, when children constituted a large portion of the New York market in enslaved Africans. Children performed a variety of tasks in household and mercantile settings. In some households, children were trained to attend table, sew, and perform other domestic services (Medford, Brown, Carrington, et al. 2009c:63). Free African children also were put to work. Boys and girls of free African New Yorkers were often apprenticed to tradesmen and farmers as a way to ensure their upkeep. As apprentices, boys were trained "at felt making, farming, barbering, brewing, block making, and coopering. Girls learned to spin, sew, knit," and perform many other household tasks (Medford, Brown, and Carrington 2009:27).

The Musculoskeletal, Arthritic, and Traumatic Effects of Work

Historical information developed by the researchers indicates that enslaved New York African men, women, and children were frequently forced into hard, physical labor. The kinds of tasks performed in urban settings differed from tasks carried out in rural settings, and the degree to which enslaved African New Yorkers were forced to work in rural versus urban contexts varied through time. Different kinds of physical tasks, the frequency of their performance, and the intensity at which they were performed is sometimes suggested by skeletal indicators of physical work. The researchers expected that there would be diverse

Table 14. Demography of the Sample Used in Stress Marker Analysis

Age in Years Categories	Males	Females	Unknown Sex
15–24	15	12	8
25–34	17	18	3
35–49	40	20	—
50+	16	13	—
Adult	10	15	—
Totals	98	78	11

Note: From Volume 1, Part 1 (Wilczak et al. 2009:Table 63).

expressions of skeletal stress markers among the New York African Burial Ground individuals "owing to anticipated differences in cultural practices and genetic susceptibility, as well as variability in labor patterns" (Wilczak et al. 2009:199).

In New Orleans, for instance, urban enslaved populations performed diverse tasks ranging from hard manual labor to less physically stressful domestic or skilled tasks. As a result, enslaved individuals may have experienced a broad range of health effects. In keeping with the wide range of tasks, many individuals from Owsley et al.'s (1987) study in New Orleans exhibited signs of hard manual labor, but others showed few signs of acute physical stress.

Wilczak et al. (2009) studied incidence rates of mechanical stress markers in individuals older than 15 from the New York African Burial Ground sample. Although enslaved children also performed arduous and repetitive forced labor, Wilczak et al. (2009) did not include individuals younger than 15 for a variety of reasons. These included (1) the confounding effects of continuous bone remodeling during childhood and adolescent development, (2) the amount of time necessary for the development of observable stress markers, and (3) the fact that physical stress markers in subadults are not well known.

Of the 391 individuals entered into the anthropometric record, 187 individuals were selected for analysis, including 98 males, 78 females, and 11 individuals of undetermined sex (Table 14). Sample sizes for comparisons among ages, sexes, vertebral regions, and joints or joint complexes varied according to sex, age range, and preservation. To understand the musculoskeletal effects of work, the researchers examined New York African Burial Ground individuals for evidences of osteoarthritis and osteophytosis, Schmorl's nodes, spondylosis, and musculoskeletal stress markers.

Osteoarthritis and Osteophytosis

Osteoarthritis, also referred to as osteoarthrosis or degenerative joint disease (DJD), is one of the most common forms of joint disease. Osteoarthritis is a disease of movable joints "defined by breakdown of bone at the articular surface of joints" (Goodman and Martin 2002:41) and an imbalance between the synthesis and degradation of the articular cartilage, leading to the classic pathologic changes of wearing away and destruction of cartilage. Osteoarthritis is idiopathic, meaning it can arise from a variety of unknown causes, but can also be caused by "joint injury or from developmental, metabolic, and inflammatory disorders" (Buckwalter and Mankin 1997). Osteoarthritis typically takes years to develop and eventually may result in eburnation, or "the formation of a hard, shiny bone callus" on bone contacts (Goodman and Martin 2002:42) (Figures 66 and 67).

A related condition, vertebral osteophytosis, is "a specific form of degeneration that is characterized by lipping (extra bony growths, usually in long spikes) on the vertebral bodies" (Goodman and Martin 2002:42). Vertebral osteophytosis is an age-related condition. Typically, vertebral osteophytosis begins to occur in individuals by the age of 30 and is present to some degree in most individuals by the age of 60 (Steinbock 1976).

Most scholars believe that degeneration is attributed to repetitive impulse loading of joints associated with repetitive activities. Microfractures appear in the bones of the joints as a result of activity; in an attempt to repair these fractures, the bone becomes

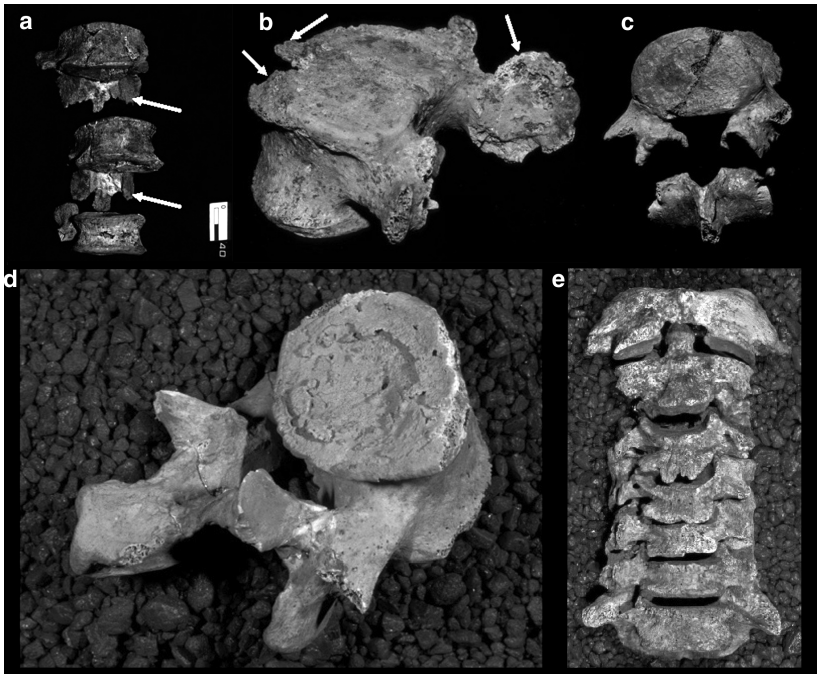


Figure 66. Spinal pathology: (*a*) severe osteoarthritis of the vertebral articular processes in a female aged 50–60 years old (Burial 40); (*b*) severe osteophytosis (left arrows) and osteoarthritis (right arrow) of a lumbar vertebra in a male aged 35–45 years (Burial 63); (*c*) vertebral spondylolysis in a female aged 35–40 years (Burial 107); (*d*) Schmorl's node depression of a lumbar vertebra in a male aged 35–45 years (Burial 70); (*e*) severe osteophytosis of the cervical vertebrae in a male aged 35–45 years (Burial 63) (from Volume 1, Part 1 [Wilczak et al. 2009:Figures 107 *(a)*, 108 *(b)*, 113 *(c)*, 112 *(d)*, 111 *(e)*]).

stiffer and resists stress better but is also less able to absorb shock, increasing stress on the articular cartilage (Radin et al. 1972). These changes result in the formation of bony lesions referred to as osteophytes, which may be the body's way of adjusting to continued stress. Eventually, extreme pressure may cause the vertebrae to prolapse. If the disc penetrates into bones, the cysts or lesions referred to as Schmorl's nodes may develop (Kilgore 1985; Steinbock 1976). Activities that contribute to osteoarthritis may often affect multiple joint locations. Weight-bearing joints, such as those of the lower back, hips, and knees, are most commonly affected.

Patterns in osteoarthritis can be used to infer activities performed repetitively by affected individuals. For instance, high frequencies of osteoarthritis in the elbows and shoulders of females at the prehistoric Dickson Mounds site were interpreted to have been the result of frequent and intensive maize grinding (Martin et al. 1979). In another study of a prehistoric population in the Canadian Arctic, high frequencies of thoracic vertebral osteophytosis among females and high frequencies of lumbar vertebral osteophytosis among males were interpreted to be related to a sexual division of labor. High frequencies of osteoarthritis in the finger joints have been associated with sewing, and high frequencies in the scapula have been associated with rowing or paddling (Merbs 1983). Increases in osteoarthritis have also been associated with agricultural intensification and intensified exploitation of marine resources (Bridges 1991; Walker and Hollimon 1989; Williamson 2000). As the researchers point out, however, the association between stress markers and involvement in a specific task or set of tasks is rarely clear.

Vertebral Joint Degeneration at the New York African Burial Ground

Using several different indicators of degenerative change, Wilczak et al. (2009) studied the occurrence of osteoarthritis in the synovial joints (joints articulated to move freely) of New York African Burial Ground individuals. They scored degenerative changes as absent (0), mild (1), or moderate to severe (2) and created a composite measure of osteoarthritis for each joint using the assigned ordinal values. Spinal osteophytosi s (spondylosis deformans) of vertebral body synchondral joints was scored based on marginal spicule (osteophyte) development on the same scale of absent, mild, or moderate to severe.

Osteoarthritis in at least one vertebral region was common for males and females between 15 and 49 years of age (Table 15). Osteoarthritis along the vertebral column was observed in 34 males and 29 females, with the number of observable males and females varying per vertebral segment (total

Figure 67. Osteoarthritis of appendicular joints: (*a*) mild to moderate osteoarthritis in the humeral articular surface of the elbow in a male aged 30–40 (left, anterior view; right, posterior view) (Burial 11); (*b*) osteoarthritis with marginal lipping in the wrist of a female aged 50–60 years (Burial 40) (from Volume 1, Part 1 [Wilczak et al. 2009:Figures 115 *(a)* and 114 *(b)*]).

sample size for vertebral column not provided). No statistically significant difference between sexes was discerned. Some bias towards lumbar involvement was observed, with the highest percentages of osteoarthritis occurring in the lumbar vertebrae for both males and females, but this is not uncommon. Osteoarthritis was seen more often among females in the lumbar vertebrae than males, however. To the researchers, high levels of osteoarthritis in the lumbar region "suggest participation in labor involving bending and rotation of the spine or indirect stress to the back through limb muscles that directly attach to vertebrae" (Wilczak et al. 2009:204).

Vertebral osteophytosis was observed somewhat less frequently than vertebral osteoarthritis, but was nonetheless fairly common. Osteophytosis along the vertebral column was observed in 23 males and 21 females, with the number of observable males and females varying per vertebral region (Table 16). When examined according to age groups, osteophytosis and osteoarthritis increased in frequency with age as would be expected, because both develop as part of the natural aging process. Individuals between 15.0 and 24.9, however, exhibited unusually high frequencies of moderate to severe degenerative changes, particularly in the lumbar vertebrae of the lower back. Within this age group, 45 percent of the individuals were affected. Across all age categories, cervical osteophytosis was more common than thoracic or lumbar osteophytosis. Osteophytosis generally affects the lumbar region first and is half as frequent in the cervical region. The fact that the cervical region was

Table 15. Distribution of Moderate to Severe Vertebral Osteoarthritis by Sex

Age In Years	Males		Females	
	No. Affected	%	No. Affected	%
	Cervical			
25–49	11 (39)	28.2	7 (23)	30.4
15–50+	18 (59)	30.5	10 (47)	21.3
	Thoracic			
25–49	12 (30)	40.0	9 (23)	39.1
15–50+	19 (52)	36.5	13 (41)	31.7
	Lumbar			
25–49	17 (40)	42.5	14 (24)	58.3
15–50+	26 (63)	41.3	26 (45)	57.8

Note: Numbers in parentheses are sample sizes (n) (from Volume 1, Part 1 [Wilczak et al. 2009:Table 64]).

Table 16. Distribution of Moderate to Severe Vertebral Osteophytosis by Sex

Age In Years	Males		Females	
	No. Affected	%	No. Affected	%
	Cervical			
25–49	12 (39)	30.8	6 (24)	25.0
15–50+	20 (60)	33.3	15 (47)	31.9
	Thoracic			
25–49	6 (32)	18.8	3 (22)	13.6
15–50+	13 (52)	25.0	8 (40)	20.0
	Lumbar			
25–49	7 (43)	16.3	3 (23)	13.0
15–50+	12 (68)	17.6	11 (43)	25.6

Note: Numbers in parentheses are sample sizes (n) (from Volume 1, Part 1 [Wilczak et al. 2009:Table 65].

the most affected by osteophytosis indicates repeated and severe mechanical strain to the neck for some New York African Burial Ground individuals. Loading on the shoulders or head can cause excessive strain to the neck. Activities that can cause excessive strain to the neck are diverse and include milking, fruit picking, use of tumplines for carrying loads, and carrying loads on the head (Bridges 1994; Levy 1968; Lovell 1994; Olin et al. 1982; Scher 1978; Wienkler and Wood 1988). Sixty percent of individuals with cervical osteophytosis also displayed cervical osteoarthritis, indicating activities that caused compression or bending of the neck joints. Substantial numbers of individuals with cervical osteophytosis who showed no signs of cervical osteoarthritis, however, indicate that diverse conditions—including anatomy, genetics, nutritional stress, disease, work—could have caused cervical joint degeneration (Wilczak and Kennedy 1998).

Appendicular Joint Degeneration at the New York African Burial Ground

For the upper limbs, osteoarthritis in the shoulder, wrist, elbow, or hand was observed for 22 females and 43 males, with the number of observable males

Table 17. Distribution of Moderate to Severe Osteoarthritis in the Upper Limb

Age In Years	Males		Females	
	No. Affected	%	No. Affected	%
	Shoulder			
25–49	6 (46)	13.0	4 (31)	12.9
15–50+	15 (76)	19.7	12 (55)	21.8
	Elbow			
25–49	16 (49)	32.7	6 (31)	19.4
25–50+	29 (82)	35.4	14 (58)	24.1
	Wrist			
25–49	10 (38)	26.3	5 (21)	23.8
15–50+	18 (66)	27.3	10 (40)	25.0
	Hand			
25–49	8 (48)	16.7	5 (29)	17.2
50+	19 (80)	23.8	12 (55)	21.8

Note: Numbers in parentheses are sample sizes (n) (from Volume 1, Part 1 [Wilczak et al. 2009:Table 70]).

and females varying among joint complexes (total sample size for upper limbs not provided). More joints were affected among individual females in comparison to males. Among females, the highest incidence of osteoarthritis was observed in the wrists. Among males, the highest incidence of osteoarthritis was found in the elbow. In both sexes, the shoulder was the least affected appendicular joint complex (Table 17).

For the lower limbs, osteoarthritis in the hip, knee, ankle, or foot was observed for 40 females and 58 males with the number of observable males and females varying among joint complexes (total sample size for upper limbs not provided). As with the upper limbs, more joints were affected among individual females in comparison to males. For both males and females, the ankle was the most frequently affected lower-limb joint complex (Table 18). Osteoarthritis in the ankle is rare in modern times and in the archaeological record (Rogers 2000).

Across age categories and joint complexes, osteoarthritis was more common in the lower-limb joints or joint complexes than the upper limbs for both males and females. Activities that could contribute to osteoarthritis in the lower limbs "include walking over uneven surfaces, performing activities while squatting, and climbing stairs and ladders" (Wilczak et al. 2009:211). Alternatively, higher incidences of osteoarthritis in the lower limbs could have resulted from excessive weight-bearing loads. Six individuals, most of them over 50 years of age, had osteoarthritis in all eight upper- and lower-limb joints or joint complexes. When examined according to age, the frequencies of moderate to severe osteoarthritis increased with age. Nonetheless, the incidence of osteoarthritis was high for young adults between the ages of 15 and 24.9 and pronounced for individuals between the ages of 25 and 34.9 years. When combined with information on osteoarthritis of the vertebral column, the evidence suggests that New York African Burial Ground individuals experienced different activity loads in the upper and lower limbs, and a high burden was placed on the pelvic girdle. The frequencies of osteoarthritis indicate sexual division of labor, the preponderance of some tasks such as sewing, and heavy workloads.

The researchers compared the New York African Burial Ground individuals to the Charleston, South Carolina, enslaved sample (Rathbun 1987). Wilczak et al. (2009:220) found differences between males and females, stating that in both the New York African Burial Ground and Charleston samples "males were more frequently affected by osteoarthritis of the elbow and females at the knee." These similarities suggested to the authors that there may have been broad similari-

Table 18. Distribution of Moderate to Severe Osteoarthritis in the Lower Limb

Age in Years	Males		Females	
	No. Affected	%	No. Affected	%
	Hip			
25–49	19 (51)	37.3	13 (31)	41.9
15–50+	33 (82)	40.2	22 (57)	38.6
	Knee			
25–49	14 (49)	28.6	13 (33)	39.4
25–50+	27 (82)	32.9	24 (62)	38.7
	Ankle			
25–49	19 (45)		15 (29)	51.7
15–50+	39 (75)		27 (56)	48.2
	Foot			
25–49	15 (45)	33.3	11 (31)	35.5
50+	28 (76)	36.8	20 (56)	35.7

Note: Numbers in parentheses are sample sizes (n) (from Volume 1, Part 1 [Wilczak et al. 2009:Table 71]).

ties in workloads between males and females, with "males lifting and carrying more and female stress at the knee associated with bending and kneeling in household labor tasks" (Wilczak et al. 2009:220).

Rankin-Hill (1997:118–119) reported that 76 percent of the adults from the Philadelphia First African Baptist Church cemetery displayed evidence of slight osteoarthritis. A higher-than-expected percentage of younger women aged 18–30 years displayed osteoarthritis, and more than 61 percent of these women also had osteophytosis. The frequency of osteoarthritis increased with age among men. Most men with osteoarthritis (82.8 percent) also had osteophytosis. This differed considerably from the Cedar Grove Baptist Church sample, for which the rate was about 42 percent (Rankin-Hill 1997:Table 5.12). Vertebral osteophytosis was found in 52 percent of the First African Baptist Church sample, with men affected much more frequently than females. This was higher than the Cedar Grove sample where about 39 percent of individuals had vertebral osteophytosis. The location of affected vertebrae differed by sex, as women were most affected in the cervical vertebrae, and men were most affected in the thoracic and lumbar regions (Rankin-Hill 1997:122).

Location of affected joints differed by sex at the First African Baptist Church. Men had greater prevalence of osteoarthritic changes in the shoulder and elbow than women, which Rankin-Hill (1997:121) relates to their occupations as laborers, porters, waiters, seamen, and carters. Females had greater frequencies in the hip, knee, and hand, again relating to the predominant occupations of washerwoman, laundress, domestic worker, and seamstress (Rankin-Hill 1997:121).

Schmorl's Nodes

Schmorl's nodes are "shallow, depressed pits occurring on the superior and/or inferior endplate of the vertebral bodies; these pits result from the pressure of cartilaginous protrusions of damaged intervertebral discs" (Wilczak et al. 2009:204). Schmorl's nodes typically appear later in life but may occur earlier in life in conditions of extreme physical stress (Capasso et al. 1999). According to Rankin-Hill (1997:125), "the frequency of Schmorl's nodes can be indicative of strenuous activity." Twenty-two males and 11 females at the New York African Burial Ground were affected with Schmorl's nodes, with the number of observable males and females varying per vertebral region (the number of observable males and females was not provided). In both sexes, most nodes were found in the lumbar region, but nodes in the cervical

Table 19. Regional Distribution of Schmorl's Nodes

Region	Males		Females	
	Number	Percent	Number	Percent
Cervical	6 (60)	10.0	1 (47)	2.1
Thoracic	10 (51)	19.6	4 (40)	10.0
Lumbar	14 (67)	20.9	9 (43)	20.9

Note: Numbers in parentheses are sample sizes (n) (from Volume 1, Part 1 [Wilczak et al. 2009:Table 67]).

or thoracic region were more common among males (Table 19). For all three vertebral regions, Schmorl's nodes were found most often in individuals between the ages of 25 and 34. Relatively high frequencies of Schmorl's nodes could reflect the application of excessive mechanical stress, but genetic factors or work history could also have played a role.

Among the First African Baptist Church cemetery individuals, Rankin-Hill (1997:125) observed Schmorl's nodes most often on T1–T9 and all lumbar vertebrae. Males had a significantly higher frequency of occurrence (one-third) than females, about 5 percent of those observed having Schmorl's nodes. Most of the individuals with Schmorl's nodes were older than 40 years, with the remainder aged 15–40 years. Comparing the Charleston Site 38CH778 sample, Rankin-Hill (1997:125) observed that the incidence of Schmorl's nodes was higher than at First African Baptist Church in Philadelphia, and there were substantially more men with the condition (54 percent) than women (24 percent).

Spondylolysis

Spondylolysis refers to the "unilateral or bilateral fracture of a vertebral neural arch and subsequent separation from the vertebral body" (Wilczak et al. 2009:206). Spondylolysis results from a combination of genetic factors and mechanical stress and is typically associated with heavy labor or athletics that involve stress to the lower back (Merbs 1989a, 1996). Four individuals (Burials 11, 37, 97, and 107) had complete, bilateral spondylolysis of L4 or L5 vertebrae. Burial 37 was aged more than 50 years; the others were between the ages of 35 and 49. Burial 107 was female; the others were male. All four individuals also had osteoarthritis, three had osteophytosis, and three had Schmorl's nodes. Three affected individuals (Burials 11, 37, and 107) had both osteoarthritis and osteophytosis in multiple vertebral regions.

A large number of factors contribute to manifestations of stress in the spine, including "differences in genetics, nutritional levels, bone density, anatomy, and posture" (Wilczak et al. 2009:208). Spondylolysis has been associated with work postures among Alaskan natives and grain porters in Zambia and Cape Province (Capasso et al. 1999)

Musculoskeletal Stress Markers

Musculoskeletal stress markers (MSMs) are "distinct marks at the site of ligament and tendon attachments to the periosteum and bone" (Wilczak et al. 2009:213). MSMs can manifest as hypertrophic bone development indicated by distinct ridges or crests at attachments (Figure 68). In more extreme cases, MSMs are expressed as stress lesions, indicated by nonlytic furrows or pits at attachments. Wilczak et al. (2009) made observations on a total of 33 attachments, including 3 attachments in the head and neck region, 19 attachments in the upper-limb region, and 11 attachments in the lower-limb region. Attachments were scored as exhibiting mild hypertrophy (1), moderate to severe hypertrophy (2), mild stress lesion (3), or moderate to severe stress lesion (4). For specific attachments with multiple MSMs, the highest score was used for analysis, and only MSMs with scores above 1 were considered for analysis to ensure the interpretation of clear cases of MSMs. In addition, only individuals with 9 or more scorable attachment sites were considered for analysis.

To compare individuals, Wilczak et al. (2009) calculated percentages of MSMs using the number of affected attachments as a percentage of the number of scorable attachments. On average, males had more MSMs than females, and percentages increased with age for both sexes. Moderate to severe MSMs occurred often in males and females, including younger adults

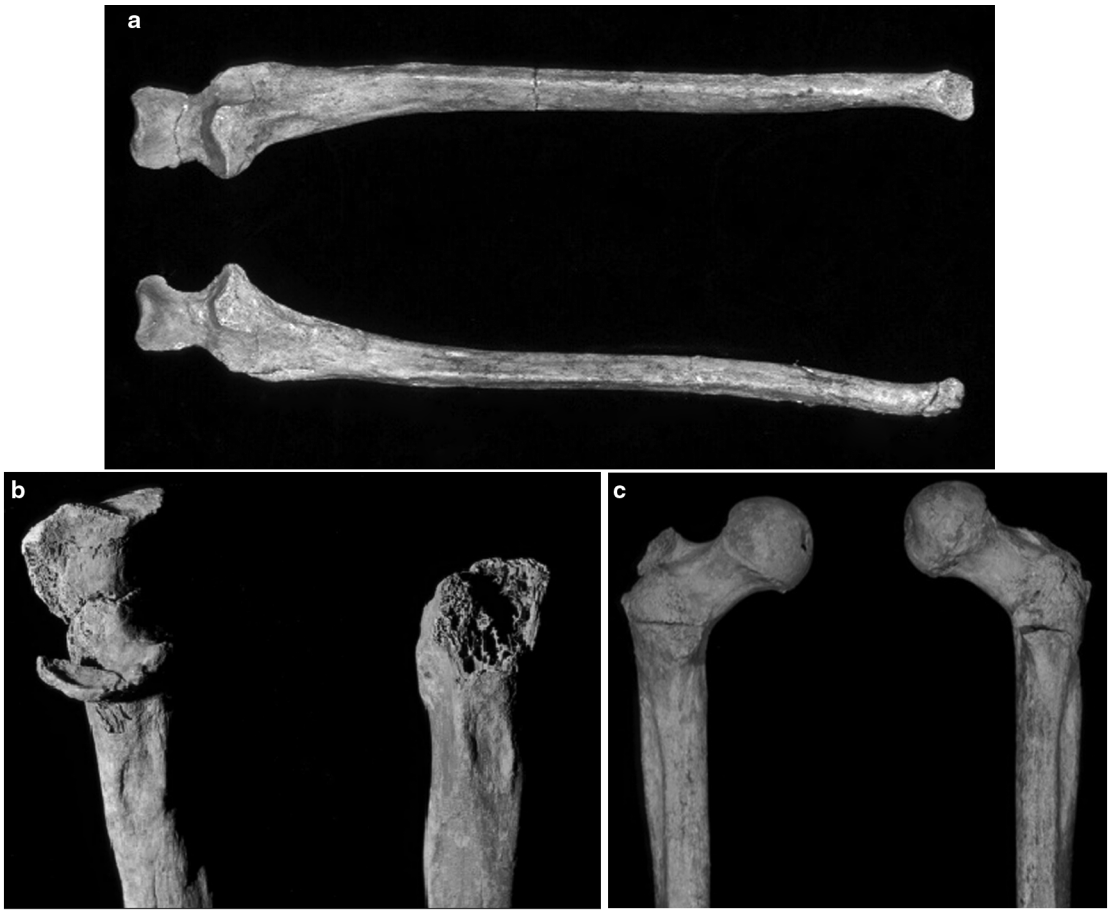


Figure 68. Hypertrophic bone development: (*a*) Severe hypertrophy of the ulnar supinator insertions in a male aged 40–50 years (Burial 369); (*b*) hypertrophy of the brachialis insertions of the ulnae in a female aged 25–35 years (Burial 223); (*c*) hypertrophy of the gluteus maximus insertions of the femora in a male aged 17–18 years (Burial 174) (from Volume 1, Part 1 [Wilczak et al. 2009:Figures 121 *(a)*, 126 *(b)*, 125 *(c)*]).

between the ages of 15 and 24.9. Typically, MSM development requires the accumulated application of stresses over time, but some MSMs can develop rapidly for heavily stressed attachments (Wilczak 1998). The occurrence of MSMs among younger adults indicates to Wilczak et al. (2009:221) that enslaved laborers, particularly males, may have been tasked with hard physical labor at a young age.

Males and females had different rank orders of affected attachments (Wilczak et al. 2009:Table 72). For males, the five most-affected attachments were linea aspera, deltoid, pectoralis major/latissimus dorsi/teres major, gluteus maximus, and brachialis. For females, the five most-affected attachments were brachialis, linea aspera, supinator, deltoid, and finger flexors.

Observed patterns in the shoulder suggest heavy lifting and carrying. Hypertrophy of the brachialis, which was found to be common among both male and females at the New York African Burial Ground, is also associated with carrying heavy loads and has "been reported in masons, bakers, and agricultural populations" (Wilczak 2009:218). The brachialis is also involved with supination or twisting of the forearm, an activity that commonly takes place during sewing or weaving. In females, high incidence of MSMs at the brachialis, supinator, and finger flexors may indicate a preponderance of sewing and weaving activities. Supinator MSMs have also "been ascribed to activities that manipulate loads while the elbow is extended, for tasks including citrus fruit picking, paddling a boat or canoe, and using heavy tools with a long reach such as furnace irons (Capasso et al. 1999)" (Wilczak et al. 2009:219). Heavy use of the supinator among females could indicate frequent manipulation of heavy objects, such as heavy pots

or water-laden clothing during cooking and washing activities.

Heavy lifting is implicated by MSMs in the linea aspera and gluteus maximus attachments. The gluteus maximus acts as an extensor in "powerful movements such as climbing, stepping on a stool, and raising the trunk from a flexed posture" (Wilczak et al. 2009:219). MSMs at linea aspera attachments are associated with "strenuous locomotor activities [such as those of] Canadian fur traders, who jogged up steep portage trails, and sixteenth-century sailors and horseback riders (Capasso et al. 1999)" (Wilczak et al. 2009:219). The combination of MSMs at linea aspera and gluteus maximus attachments could have resulted from a variety of different activities, but overall is "consistent with picking up heavy loads, both by bending at the hip and lifting up the burden or . . . when lifting from a squatting posture (Mack et al. 1995)" (Wilczak et al. 2009:219). Comparing their findings to those from the Catoctin Furnace, Maryland, sample of enslaved industrial workers, Wilczak et al. (2009:220) found similar patterns of stressful lifting as inferred "from the frequency of deltoid, pectoral, and teres major MSMs, as well as shoulder and vertebral breakdown" (see also Kelley and Angel 1983).

Wilczak et al. (2009) also compared their findings to information from the small New Orleans sample representing the urban enslaved group interred at St. Peter Street Cemetery (Owsley et al. 1987). They found that the upper limb was more affected than the lower limb among New Orleans individuals, the reversal of the pattern seen at New York African Burial Ground. Females had only relatively minor hypertrophies, suggesting to the researchers that "they were performing less heavy physical labor than males, perhaps as enslaved domestic laborers" (Wilczak et al. 2009:221). As had been observed for urban enslaved individuals in the New Orleans sample, the New York African Burial Ground researchers observed wide variability in the incidence of MSMs and osteoarthritis among New York African Burial Ground individuals, which they suggest indicates "variability in the severity of labor within the urban enslaved populations and a social hierarchy" (Wilczak et al. 2009:221). They conclude that both urban sites (New Orleans and New York African Burial Ground) "contrast with the more consistently high levels of stress documented in the rural enslaved of South Carolina, who presumably would have engaged in plantation work and farmwork with less variability in the types of tasks performed" (Wilczak et al. 2009:221).

Family Life

The breakup of families, the imposition of restrictive rules on interaction among enslaved Africans, the highly skewed ratios of men to women, and the prohibition of polygamy worked together in New York to break down traditional African families. The fracturing of family life had great consequences to child health, female fertility, and overall mortality rates. The negative effects of enslavement on family life worsened over time. During the period of Dutch rule, family life may have been less restricted than later, when the English ruled the colony (see Chapter 7).

Many traditional African societies defined their communities in terms of kinship relations (Bailey 2005). For many African societies, social structure was based on kinship—either patrilineal or matrilineal lineages that traced their kinship back to the legendary past (Argyle 1966; Bohannan and Curtin 1964; Busia 1954; Chukwukere 1981; Medford, Brown, Carrington, et al. 2009e:65; Piersen 1996). Ancestor veneration was a primary principle of ideology (Adjei 1943; Boateng 1996; Vogel 1993). Lineages acted as political entities, economic units, and corporate units with specific rights and privileges. Lineages were grouped together into clans. Kinship structures determined rights to specific resources, required clan members to observe certain food taboos, and arranged funeral rites (Bailey 2005; Forde 1954; Thornton 1992). Lineage and clan relationships also structured settlement patterns, with related kin living together in residential villages (Busia 1954). Compounds were shared by domestic groups, each consisting of a man, his wives, and their children. Kinship was one means of integrating enslaved Africans and other "foreigners" into African societies. Law (1991:66) has noted that the practice of large-scale polygyny implies an unequal distribution of marriageable men and women; it also provided a source of status and economic differentiation among the men of African societies. Wives as well as enslaved laborers were a source of wealth.

Enslaved laborers in African societies enjoyed a less restrictive life than their counterparts in diasporic contexts. In many areas, the enslaved were treated as family members, were accorded similar comforts and privileges, and could rise to positions of authority and prominence. Eventually, enslaved individuals and their children might be absorbed into the household and granted full rights. Burnside (1997:97) has pointed out that this was more likely in the case of females, who were highly desirable for their fertility and skills

in farming and crafts. The acquisition of enslaved individuals was one means by which families could be built, maintained, and extended (Bailey 2005).

The Middle Passage and life in the New World must have been severely damaging to traditional kinship relations (Bailey 2005). People of different clans and lineages were assembled indiscriminately on slavers and then separated again when they were transferred to new enslavers in colonial New Amsterdam and New York, severing ties formed before or during the Middle Passage. Special bonds forged between survivors of the same Middle Passage voyage were rarely maintained because the enslaved were forced to live in disparate households. In diasporic societies, the mechanisms of kinship inheritance and the social functions of lineages and clans became dislocated by processes of enslavement. Burnside (1997:164–166) has suggested, however, that traditional African kinship bonds may have been reinforced rather than severed by the Middle Passage, despite Euroamerican suppression. Among enslaved laborers united by shared experience, newly formed familial and kinship bonds no doubt served as a support system. Medford, Brown, Carrington, et al. (2009e:67) note that "even as bondage challenged African social and cultural structures, enslaved people continued to rely on those institutions that provided physical, psychological, and spiritual support. Kinship networks continued to serve this end." The most common form of affiliation that influenced family formation was the diasporic "nation" discussed in Chapter 4.

In Dutch New Amsterdam, it was possible for some enslaved laborers, once freed, to form families in their own independent households. Africans freed by the Dutch West India Company lived with their families on plots of land on the city's outskirts that were granted to them at the time of their manumission (Goodfriend 1992:115). Under Dutch rule, free New Amsterdam Africans were also allowed to marry legally, which included marriages between African women and European men (Wilson 1994:38). Harris (2003:21) has estimated that more than 100 children were born to enslaved and free New Amsterdam African couples under Dutch rule. Atypical ratios of men to women and spatial variation in gendered labor regimes, however, complicated the ability of enslaved laborers to find mates, procreate, or care for children. For instance, in the farming area called the Out Ward, which included Harlem and the Bowery, men far outnumbered women and children among the African-descended population (Foote 2004:84–85).

Most enslaved laborers in Manhattan lived in conditions that were not conducive to family formation. Men and women of comparable ages typically were separated in different households and lived under the same roof as their enslavers. European enslavers often prevented enslaved laborers living in different households from interacting, even if they were husband and wife (Medford, Brown, Carrington, et al. 2009e:71–72). The constant prospect of sale to unknown enslavers disrupted family formation and was traumatizing to those who did manage to form familial attachments. Some enslavers recognized the emotional and familial bonds among their enslaved laborers and attempted to preserve them (e.g., Foote 2004:151–152), but these were few in comparison to the many enslavers who treated their servants inhumanely by breaking families apart. When enslaved families needed to be sold, some enslavers attempted to preserve the mother-child bond by selling mothers together with their children. Such acts did not come without ulterior motives. Foote (2004:152) has pointed out that "these slaveowners understood that the gift of paternalistic benevolence was a means of imposing an obligation of obedience on their slaves."

Enslavers also attempted to prevent marriage and procreation. The prospect of being burdened with the feeding and clothing of the unwanted children of their enslaved female servants moved enslavers to choose infertile women. Barrenness was a selling point; enslaved females were sold if they continued to produce too many offspring (Foote 2004:75). Enslaved laborers who managed to find mates were often separated deliberately (Goodfriend 1992:118). Polygamy continued to be practiced, however, and some Africans' refusal to divorce one or more wives kept them from accepting Christianity (Goodfriend 1992:122). Pervasive legal proscriptions against interactions among enslaved laborers would have inhibited, to some degree, the ability of enslaved laborers to build family units (see Chapter 7) (Medford, Brown, Carrington 2009:26; Medford and Brown 2009c:92). It was not until 1809 that Africans were again allowed to marry and own real estate under the legal sanction of New York State (Wilson 1994:64–65) (see Chapter 7).

A few mechanisms to increase family formation and stability were available to enslaved Africans. Wilson (1994:21–22) has documented the practice of African enslavement, which "provided a means for some free Africans to aid enslaved kin and non-kin, to gain freedom, or at least to move from a more restrictive bondage status to a bondage of lesser restrictions." Twenty-eight manumissions recorded in the eigh-

teenth and nineteenth centuries involved an African male paying a monetary sum for the "freedom" of his wife or children, and Wilson believes there probably were more than those recorded. Foote (2004:150–151) argues that the Black Code of 1712 was an anti-manumission measure that, because of high costs now associated with manumission, made it extremely difficult for free African New Yorkers to purchase the freedom of their enslaved loved ones. Some nevertheless managed to do so; in 1724, John Fortune had "saved enough money to purchase an enslaved woman named Marya, whom he later married, and her son, perhaps his own offspring" (Foote 2004:150).

The ugly specters of sexual exploitation and rape of enslaved women should also be considered. Foote (2004:153) has noted that rape has much in common with chattel slavery, in that both involve the violent seizure of a person's body. She writes, "patriarchy and white supremacy combined to make black females vulnerable to sexual exploitation at the hands of white men" (Foote 2004:156). Sexual exploitation of African women and female children often began during the Middle Passage (Burnside 1997:131–132). It was rampant in the West Indies plantations, where it fostered the spread of venereal disease. Such relationships could be the potential source of the treponemal infections observed in the New York African Burial Ground burials (see Chapter 5). Burnside (1997:161) has suggested that some enslaved women who were forced to submit sexually to their enslavers resorted to aborting unwanted pregnancies rather than "bearing the children of such unhappy couplings."

Together with high mortality, especially for infants, the imbalanced sex ratios and the inability to form families affected the survival of enslaved laborers and succeeding generations born into slavery. Conditions for family formation and procreation may have been even worse in other regions where slavery was practiced. Thornton (1992:166–167) has pointed out that there were virtually no children on food-producing estates in Peru, Venezuela, and Central America; Mexican sugar estates; and some Virginia plantations because of the need for specialized, adult-male labor. Consequently, this resulted in a constant need to import new enslaved laborers to replace those who died. Marriage and child raising were more possible in Dutch New Amsterdam and British New York, but the researchers found that combined effects of enslavement on fertility and health likely kept the population at below-replacement values, and population growth resulted mainly from continuous forcible migration over time.

Family Life for the African Burial Ground Population

As no records were kept of who was buried in the African Burial Ground, the relationships among interred individuals are difficult to infer. Genetic evidence could possibly indicate which individuals were closely related, but genetic testing has to date been conducted on only a limited number of individuals (Jackson et al. 2009). The burial of jewelry with some individuals could also suggest family relationships, but the nature of those relationships or the circumstances under which exchange occurred are uncertain. As families were often separated across disparate households, the researchers suggest that gift giving and visits among family members may have been "a key strategy for maintaining intergenerational attachments" (Bianco et al. 2009:328). Family members may have also exchanged "food, names, stories, spiritual instruction, physical care," although enslavers may have rarely acknowledged these kinds of exchanges (Bianco et al. 2009:329). Bianco et al. (2009:329) conclude that the burial of jewelry with children and infants at the New York African Burial Ground and other African Diaspora sites could indicate the maintenance of intergenerational ties, such as those between parent and child.

Most individuals were provided a "proper" individual burial, and many burial locations were discrete (Perry and Howson 2009). However, some patterning in burial locations could represent family relationships. Instances in which two or more burials shared graves or multiple burials were clustered according to age, sex, or proximity were identified by the researchers. The researchers suggest that "in many other cases . . . individuals were placed deliberately in relation to each other, although not in the same grave" (Perry and Howson 2009:116). They note that clusters of graves could represent relationships among individuals. The researchers identified multiple instances in which infants or young children were buried in close proximity to adults with whom they could have been related. Other apparent clusters included clusters of child burials. These burial clusters could represent "the setting aside of specific locations for child burials at particular times during the cemetery's history or may indicate that the deaths of numerous children took place in a short period of time, as could be expected to occur during an epidemic" (Perry and Howson 2009:119).

Multiple lines of evidence suggest that the locations of specific burials were marked and remembered

through time. Grave markers—including rectangular stone slabs and rows of cobbles—were discovered at the New York African Burial Ground. The researchers inferred that the use of grave markers could have been common and that some grave markers may have been removed during the historical period once the African Burial Ground was filled in and developed (Perry and Howson 2009). In some cases, rows of cobbles may have delineated plots of related individuals (Perry, Howson, and Bianco 2009:372). Historical and ethnographic information indicates that amongst individuals in the African Diaspora, graves were commemorated with items placed deliberately at the surface of grave shafts. This practice may have also been performed at the African Burial Ground, although excavation techniques prevent full evaluation of this inference (Perry and Howson 2009). Further, some African mortuary practices involved graveside funeral rites performed long after interment of the deceased (Medford, ed. 2009). Therefore, as the locations of burials were likely marked, remembered, and revisited, many individuals may have been buried according to family relationships, such as in the same grave or in close proximity to kin, rather than buried without consideration of social relationships.

The researchers identified 27 instances of possible shared graves at the New York African Burial Ground. These were burials interpreted to have shared the same grave rather than have been in close proximity to one another (Perry and Howson 2009:Table 19). Half of the shared graves represent one or more infants or children buried within or adjacent to the grave shaft of an adult. Often, these were infants or young children who were buried directly above the burial of an adult woman or immediately adjacent to the grave shaft of an adult. In one instance, a woman aged 35–45 years was buried with a newborn in a coffin placed within the coffin of the adult woman (Burials 12 and 14). In another instance, a woman aged 25–35 years was buried with a newborn cradled in her right arm (Burials 335 and 356) (Perry and Howson 2009:116). These instances of shared graves could represent a mother and child who died together in childbirth. Other instances in which the deaths of children could have been related to those of their mother include two young children buried above a young woman, aged 17–21 years (Burials 72, 83, and 84), and the instance of a newborn and a 6–12-month-old infant buried directly atop the coffin of a woman aged 25–30 years (Burials 142, 144, and 149). In other cases, there appears to have been an interval of time between interments in shared graves, suggesting in some cases that a child died some time after the death of his or her mother or caregiver or that some young infants and children were buried in the same locations with older individuals, possibly ancestors, in order to benefit from their spiritual care and protection.

Ten possible shared graves were of children buried together. In one instance, (Burials 126 and 143), two children were placed in the same coffin. In other instances, a younger child was buried immediately above an older child. Cases in which children were buried together could represent siblings, close kin, or children who were raised in the same household. Four possible shared graves consisted of two adults buried atop one another or side by side. These individuals could have been related in a variety of ways, including as marriage partners or close kin.

Future studies, which incorporate spatial analysis, genetic studies, pathology, artifact associations, and formation processes could further tease apart possible family relationships among individuals interred at the New York African Burial Ground. This information could lead to the development of hypotheses about how enslavement, family formation, health status, and mortality were related at the African Burial Ground. How closely related were individuals buried in the same grave or in close proximity? Did related individuals receive similar treatment or share similar life histories? Does evidence from the New York African Burial Ground suggest that the death of infants and children followed the death of close kin who may have cared for them?

Historical Demography and Paleodemography

Rankin-Hill et al. (2009) studied the demography of colonial Africans in New York by combining historical and paleodemographic evidence on the structure of the African population of colonial New York. Paleodemography is "the study of archaeological populations based on skeletally determined age and sex" (Rankin-Hill et al. 2009:120). More broadly, "paleodemography is the study of vital rates, population distribution, and density in extinct human groups, especially those for which there are no written records" (Buikstra and Konigsberg 1985:316). Age and sex distributions of skeletal samples are often used to assess factors such as mortality, population structure, hazard rates, and fertility. Common products of paleodemographic pro-

files are estimates of mortality through development of life-expectancy and survivorship curves.

In reconstructing colonial African demography, Rankin-Hill et al. (2009:119) had four explicit objectives:

> (1) establish population profiles and demographic trends for the New York African Burial Ground skeletal sample that integrate these two data sets [history and paleodemography]; (2) reveal the New York African population in relation to its surrounding temporal, political, economic, and sociocultural landscape; (3) place the skeletal sample within the biohistorical framework of the African Diaspora in America; and (4) provide a conceptual framework for the archaeological research work.

Further discussion of colonial African demography in New York was provided by Blakey, Rankin-Hill, Howson, et al. (2009) in Chapter 13 of the skeletal biology report in this series. Their findings are integrated here.

Of particular interest in the analysis of colonial African demography in New York are processes of migration, fertility, mortality, and population structure. Records of colonial Africans in New York are less comprehensive than those of Euroamericans. Rankin-Hill et al. (2009:120) list several limitations in historical documentation pertaining to demographic reconstructions: (1) limited biographical or socioeconomic detail, (2) variation between sources in age categories and other designations, and (3) undercounting of Africans due to smuggling and tax evasion. Also, birth and death records comparable to those made by Euroamerican churches are virtually nonexistent for seventeenth- and eighteenth-century people of African descent. Rankin-Hill et al. (2009) have suggested that because of these limitations, skeletal data are better for assessing mortality than historical data. In their reconstructions, the researchers used a sample of 301 individuals for which age (for subadults and adults) and sex (for adults) could be determined from the New York African Burial Ground. This sample consisted of 102 males, 69 females, and 130 subadult skeletons of determinable age (Rankin-Hill et al. 2009:120).

Limitations on Demographic Reconstruction

For some time, paleodemography has suffered from a crisis in interpretation. Paleodemographers compare skeletal age-at-death distributions to model life distributions from living or simulated populations. In the 1970s, researchers focused on problems and prospects in the use of model life tables to interpret demographic variables from skeletal populations (Buikstra 1976; Moore et al. 1975). The processes that create age-at-death distributions in skeletal populations, however, are disputed and are not clearly understood. In fact, by the following decade, some researchers (e.g., Bocquet-Appel and Masset 1982) sounded the death knell for paleodemography. Some scholars have argued that the use of life tables for mortuary populations can result in highly inaccurate demographic profiles and the reconstruction of populations without ethnographic precedent (e.g., Howell 1982). Other scholars have criticized age estimation and the effect of errors in estimation on paleodemographic reconstruction (e.g., Bocquet-Appel and Masset 1982).

In the 1980s, the problem of age assessment was highlighted as a major problem in paleodemography (Bocquet-Appel and Masset 1982). Age assessment continues to be a problem today, as some researchers argue that skeletal ages are systematically underestimated. This is particularly the case with infants, an age group that is universally regarded as underrepresented owing to various factors, not the least of which is preservation (Ubelaker 1978). Some scholars exclude infants from analysis for this reason (Dumond 1990; Sattenspiel and Harpending 1983). Another problem that surfaced in the 1980s was that, in certain circumstances, age-at-death distributions can register fertility more than mortality (Johansson and Horowitz 1986; Sattenspiel and Harpending 1983). Common sense suggests that age-at-death distributions are a reflection of mortality, but some researchers argue that common sense is wrong. Recent studies continue to forward the argument that variation in fertility substantially influences age-at-death distributions (McCaa 2002).

A number of prominent researchers (Buikstra and Konigsberg 1985; Greene et al. 1986; Van Gerven and Armelagos 1983) refuted many of the objections raised by Bocquet-Appel and Masset (1982). They noted, however, the need to refine methods for estimating age in older adults, to standardize aging techniques across observers, to use statistical techniques appropriate for population comparisons, and to evaluate paleodemographic results against biologically reasonable demographic patterns. They concluded that despite the need for advances in methods, the field of paleodemography has great promise.

In the 1990s, Wood et al. (1992) introduced their concept of the "osteological paradox" arguing that three conceptual problems complicate or confuse paleodemographic interpretation: (1) demographic nonstationarity, (2) selective mortality, and (3) hidden heterogeneity. Demographic nonstationarity refers to the problem that most paleodemographic studies conveniently assume a stationary state of "closure to migration, constant age-specific fertility and mortality, zero growth rate, and an equilibrium age," when, in fact, most populations are not stationary (Wood et al. 1992:344). In a changing population, fertility has major effects on age-at-death distributions, and mortality has only minor effects. Selective mortality refers to the problem that skeletal samples corresponding to a particular age are not representative of the original population at risk of death for that particular age. They are only the individuals who succumbed to age-specific risk. Individuals who did not succumb to age-specific risk are encountered skeletally as older individuals corresponding to a different age group. For instance, it might be inferred from skeletal samples that many 20-year-olds had periosteal lesions when, in fact, it may have been mainly those who died who had periosteal lesions. The concept of hidden heterogeneity in risks hinges on the fact that in a given population, different individuals have different susceptibilities to disease and death. When the differential exposure of individuals to health risks is unknown, as is often the case for archaeological examples, paleodemographers have no direct means of linking aggregate age-specific mortality risks to individual risks of death (Wood et al. 1992).

Other problems in paleodemographic reconstruction are the complications introduced by archaeological sampling and formation processes of the archaeological record, including differential preservation. This is particularly problematic for paleodemography, because mortuary practices are almost universally influenced by the deceased's identity, and it cannot be reasonably assumed therefore that individuals were buried randomly in cemeteries. Nonetheless, paleodemographic assessment can be a valuable tool for understanding past populations, particularly when evidence from historical documents can be used to cross-check or supplement interpretations of paleodemographic trends.

In the case of the New York African Burial Ground, the researchers used historical data to demonstrate that importation, or in-migration, of enslaved laborers was a constant factor that affected the African population of seventeenth- and eighteenth-century New York City. Moreover, importers of enslaved Africans tended to focus on particular age and sex categories, resulting in biased input of enslaved laborers from external populations. In addition, as has been discussed, the constraints placed on enslaved laborers made it difficult or impossible to form normal family relationships, affecting childbearing rates as well as the ability of enslaved women to raise their children.

New York African Burial Ground Paleodemography

The researchers examined mortality among adults and subadults, historical demography, age, and sex structure of the sample and compared the New York African Burial Ground to other samples of enslaved and free people of African or European descent. Their results are discussed below.

Mortality and Fertility

The age-at-death distribution for New York African Burial Ground individuals is bimodal, indicating that in comparison to older subadults and young adults, proportionally higher numbers of infants, young children, and older adults are represented in the death assemblage (Figure 69). The bimodality of the distribution is made more pronounced because, according to standard practice (e.g., Storey 1985), subadult percentages are calculated according to 1-year age intervals, whereas adults were represented by 5-year age intervals. When individuals of all ages are grouped according to 5-year intervals, it remains clear that infants and children form a high percentage of the assemblage. About one-third of all individuals died before the age of 5, and of these, more than half died before reaching 1 year of age.

Considering the subadults only, mortality was highest between the age of birth and 6 months; 22.3 percent of individuals less than 15 years old died before reaching the age of 6 months. Another 16.9 percent died before the age of 1 year. Together, more than half of all children in the sample died before reaching the age of 2. Percentages declined with increasing age, with the exception of a bump in individuals who died between the ages of 4 and 5 (n = 13, or 10 percent). Perhaps this bump represents factors leading up to the sale of young children, which Blakey, Rankin-Hill, Howson et al. (2009) posited to have occurred often by the age of 6.

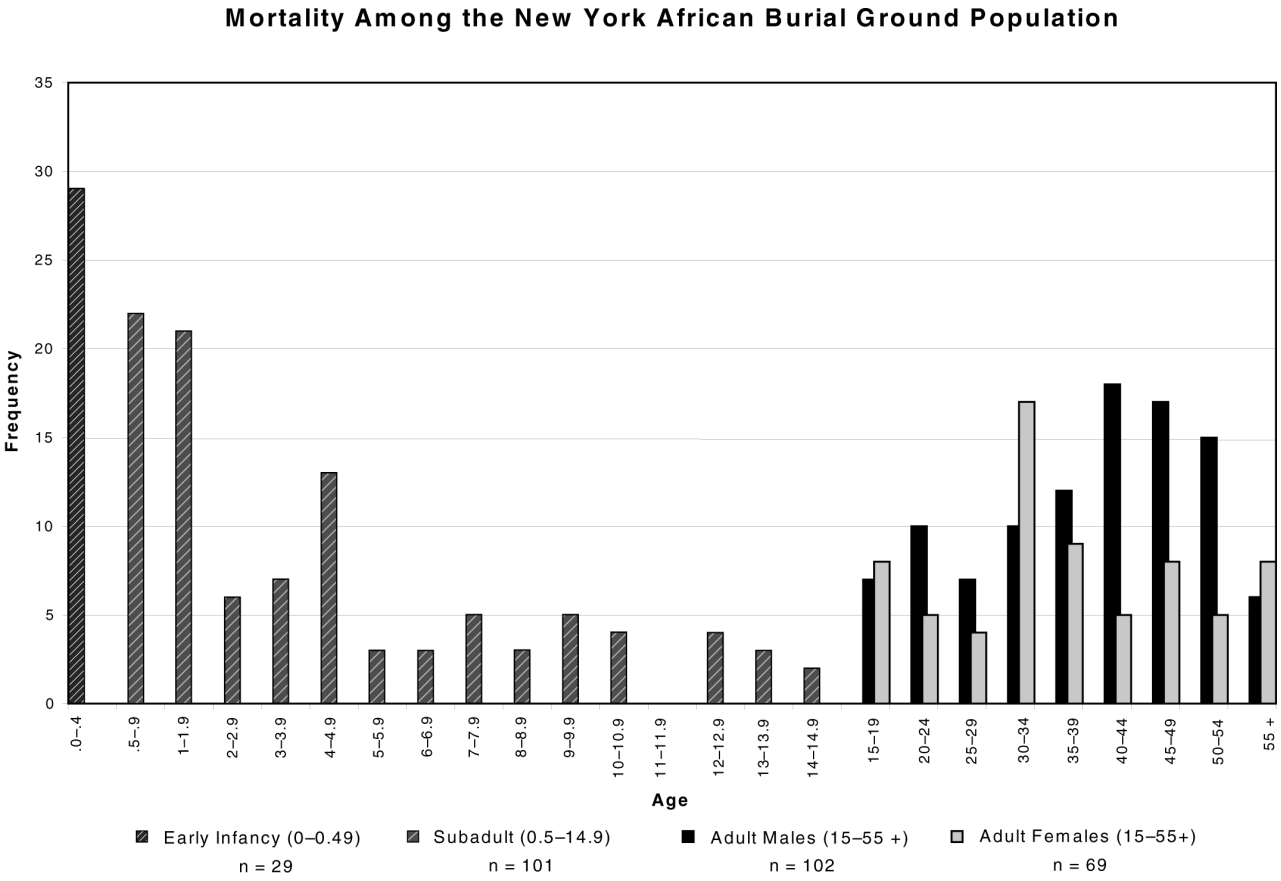


Figure 69. Mortality among the New York African Burial Ground population (from Volume 1, Part 1 [Blakey, Mack, Shujaa, et al. 2009:Figure 26]).

When separated by time, a higher percentage of individuals in the late interval (Late-Middle to Late Groups) died in their first year compared to the early interval (Early to Middle Groups) (Table 20; see also Appendix A). Theoretically, this could represent an increase in fertility over the course of the eighteenth century, but sample size and other demographic issues complicate interpretation. Rankin-Hill et al. (2009) have argued that because African-affiliated population growth in New York City was low and gradual throughout the eighteenth century, high fertility may not be indicated by high proportions of infants and young children. Also, large numbers of children were imported later in the century. This could be reflected in an apparent increase through time in child mortality.

Historical records compiled by the researchers indicate that, over the course of the eighteenth century, the New York African-affiliated population increased 8.4-fold (Table 21). At the same time, the European-affiliated population grew by a factor of 12.2. If population growth is modeled as exponential, the African-affiliated population grew at an intrinsic growth rate of 2.11 percent between 1698 and 1771 (Africans = $733.02.58e^{0.0211*year}$, $r^2 = 0.9688$). Between 1698 and 1771, population grew from approximately 700 African-affiliated individuals to 2,278 African-affiliated individuals. The recorded African-affiliated population appears to have declined between 1771 and 1786. This may be largely because of disruptions during the Revolutionary War and to the emigration of as many as 3,000 Loyalist blacks from New York after the Revolutionary War (Hodges 1999; White 1991; see Chapter 3). Between 1786 and 1800, population grew at an annual rate of 7.15 percent, 3.4 times faster than it had between 1698 and 1771 (African-affiliated = $2040.1e^{0.0715*year}$, $r^2 = 0.9900$). During both periods, population growth was largely the product of in-migration rather than fertility. Some evidence suggests that the New York African population reproduced at below-replacement levels (Blakey, Rankin-Hill, Howson et al. 2009). If so, patterns in eighteenth-century population growth were purely the result of population movement rather than reproduction.

Table 20. New York African Burial Ground Subadult Mortality

Age Category	Number	Percent of Subadults	Percent of Total
0–6 months	29	22.31	9.6
7–12 months	22	16.92	7.3
12–24 months	21	16.10	7.0
2–3	6	4.60	2.0
3–4	7	5.30	2.3
4–5	13	10.00	4.3
5–6	3	2.30	1.0
6–7	3	2.30	1.0
7–8	5	3.80	1.7
8–9	3	2.30	1.0
9–10	5	3.80	1.7
10–11	4	3.10	1.3
11–12	0	0.00	0.0
12–13	4	3.10	1.3
13–14	3	2.30	1.0
14–15	2	1.50	0.7
Total	130	100.00	43.2

Note: Age category is in years unless otherwise noted (from Volume 1, Part 1 [Rankin-Hill et al. 2009:Table 16]).

Although New York City's European population was larger throughout the eighteenth century, European and African populations grew at similar rates. Records compiled by the researchers indicate that between 1698 and 1771, the European population grew at a rate of 2.09 percent, almost exactly the same rate as African-affiliated individuals (European-affiliated individuals = $3564.9e^{0.0209*year}$, $r^2 = 0.9647$). During this interval, the European-affiliated population grew from 4,237 in 1698 to 18,726 in 1771. Unlike the African-affiliated population, the European-affiliated population of New York City did not decline between 1771 and 1786, but it did undergo substantial demographic shifts associated with the Revolutionary War (Hodges 1999; White 1991). Between 1786 and 1800, the European-affiliated population in New York grew at a rate that was similar to but lower than the African-affiliated population growth rate. During this time, the European-affiliated population grew from 21,507 to 51,796, an intrinsic growth rate of 6.24 percent (European-affiliated individuals = $20364e^{0.0624*year}$, $r^2 = 0.9995$). Oddly, similar growth rates of European- and African-affiliated populations during the eighteenth century raise the possibility that the influences of fertility and migration on population growth could have been similar for both populations. In other words, despite obvious differences in living conditions and socioeconomic status, similar demographic forces of migration may have driven African- and European-affiliated population growth.

In the New York African Burial Ground sample, adult males and females exhibited different mortality profiles (Table 22). Either adult females tended to die younger, or younger females were more numerous than younger males. The largest percentage of adult males died between the ages of 40 and 50. By contrast, the largest percentage of adult females died between the ages of 30 and 35. By the fourth decade of life, nearly two-thirds of the adult females had died, whereas less than half of the males had died. Taking the osteological paradox discussed above and historical information into account, Rankin-Hill et al. (2009) offer five scenarios to explain age-at-

Table 21. Population of New York County, 1698–1800

Year	Total	Black	White	Percent Black
1698	4,937	700	4,237	14.2
1703[a]	4,391	799	3,592	18.2
1712	5,861	975	4,886	16.6
1723	7,248	1,362	5,886	18.8
1731	8,622	1,577	7,045	18.3
1737	10,664	1,719	8,945	16.1
1746	11,717	2,444	9,273	20.9
1749	13,294	2,368	10,926	17.8
1756	13,046	2,278	10,768	17.5
1771	21,863	3,137	18,726	14.3
1786	23,614	2,107	21,507	8.9
1790	31,225	3,092[b]	28,133	9.9
1800	57,663	5,867[c]	51,796	10.2

Note: From Foote (1991:78) and White (1991:26), except 1703. Both Foote and White have corrected the raw figures. See also Kruger (1985:131), though there are some discrepancies in the percentages for 1786, 1790, and 1800 (from Volume 1, Part 1 [Rankin-Hill et al. 2009:Table 17]).

[a] From census of households in New York City (see below). These figures differ from those given in the 1703 census of the colony of New York, which listed only 630 blacks.

[b] Includes 1,036 free and 2,056 enslaved blacks.

[c] Includes 3,333 free and 2,534 enslaved blacks.

Table 22. New York African Burial Ground Adult Mortality

Age Group	Male			Female			Adults		
	Number	Percent Male	Percent Total Population	Number	Percent Female	Percent Total Population	Number	Percent Adult	Percent Total Population
15–19	7	6.9	2.3	8	11.6	2.7	15	8.8	5.0
20–24	10	9.8	3.3	5	7.2	1.7	15	8.8	5.0
25–29	7	6.9	2.3	4	5.8	1.3	11	6.4	3.7
30–34	10	9.8	3.3	17	24.6	5.6	27	15.8	9.0
35–39	12	11.8	4.0	9	13.0	3.1	21	12.3	7.0
40–44	18	17.6	6.0	5	7.2	1.7	23	13.5	7.4
45–49	17	16.7	5.6	8	11.6	2.7	25	14.6	8.3
50–54	15	14.7	5.0	5	7.2	1.7	20	11.6	6.6
55+	6	5.9	2.0	8	11.6	2.7	14	8.2	4.7
Total	102	100.0	33.9	69	100.0	22.9	171	100.0	56.7

Note: From Volume 1, Part 1 (Rankin-Hill et al. 2009:Table 15).

death distributions in the New York African Burial Ground sample:

1. Variation in mortality reflects the age-and-sex-structure of imported enslaved laborers.
2. Elevated percentages for some age groups indicate recent arrivals who did not survive exposure to New York living conditions.
3. Young adults were biologically compromised and at greater risk of early deaths.
4. These distributions could have been affected by sample bias.
5. The results could have been affected by a combination of multiple factors.

Sex Ratios

One way to assess population stability is through the interpretation of adult sex ratios. Sex ratios are calculated as the proportion of males to females multiplied by 100. A sex ratio near 100 means that the numbers of males and females are in roughly equal proportions and can be interpreted to mean "a favorable availability of marital partners for the establishment of families" (Rankin-Hill et al. 2009:125). A sex ratio higher than 100 means a preponderance of males, and a sex ratio lower than 100 means a preponderance of females.

Historical patterns of voluntary migration or frontier expansion often involve early waves of younger adult males followed by women and children who arrive later in the settlement process. Hence, the sex ratios of young colonial or frontier settlements are often quite high (Goodfriend 1992:139). The trade in enslaved Africans as a whole also favored exportation of males from Africa, resulting in high overall sex ratios during much of the slave-trade era. Sex ratios of enslaved laborers exported from Africa sometimes approached 200, but the sex ratios of Europeans were even higher (Eltis 2000, 2001). Europeans were willing to pay more for adult males that could be used in plantation labor gangs. Africans valued women for their agricultural labors and skills in craft work. African women were often reserved for African labor markets, whereas African men were more often dedicated to the export market. It seems likely that demographics were skewed for all New York City residents, Africans and Europeans alike. Sex ratios and the ratio of adults to children changed dramatically over time and from place to place, however, as is discussed in Chapter 4.

The researchers found that there was demand in New Amsterdam and New York City for both male and female enslaved laborers for different kinds of work. In contrast to other areas of the Americas where men were more dominant, there appears to have been substantial demand for women and children to work as enslaved household domestic servants in New York. According to historical records, in only 3 of 10 instances during the eighteenth century did the sex ratio of African-affiliated individuals exceed 100 (Figure 70; Table 23). Only in 1746 was the sex ratio substantially higher than 100 (126.7). The sex ratio did fluctuate through time. It decreased from 1703 to

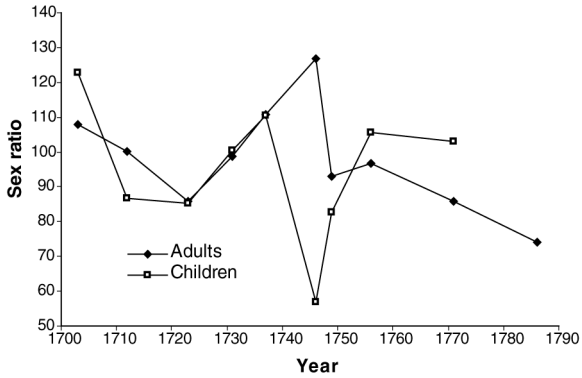


Figure 70. African adult sex and child sex ratio in eighteenth-century New York City (developed from information in Volume 1, Part 1 [Blakey, Rankin-Hill, Goodman, et al. 2009:Figure 142 and Tables 97 and 98]).

1723 and then increased steadily from 1723 to 1746. After 1746, the sex ratio decreased to below 100 and continued to decrease for the remainder of the century. Child sex ratios followed similar trends. Child sex ratios fell from a male-dominated ratio in 1703 to a female-dominated ratio in 1723. Child ratios closely mirrored adult sex ratios between 1723 and 1737 but plummeted in 1746, when a huge relative increase in the population of African-descended female children occurred. After 1746, child sex ratios rose to more equitable levels (Blakey, Rankin-Hill, Howson et al. 2009; Medford, ed. 2009).

By contrast, the adult sex ratio derived from New York African Burial Ground skeletal remains is much higher than the ratio obtained from historical records. The overall sex ratio obtained from a total of 171 sexed adults is 146 and is only marginally different when ambiguously sexed individuals are removed. Through time, the skeletal sex ratio changed dynamically. For individuals assigned to the Early and Middle Groups, dating before ca. 1760, sex ratios were between 96

Table 23. African Population by Age and Sex, Eighteenth-Century Censuses

Year	Adults		Children		Age Cut-Off	Label in Census	Notes
	Male	Female	Male	Female			
1703	298	276	124	101	≤16	negroes	
1712	321	320	155	179	≤16	slaves	
1723	408	476	220	258	not given	negroes and other slaves	presumed 16
1731	599	607	186	185	≤10	blacks	
1737	674	609	229	207	≤10	black	
1746	721	569	419	735	≤16	black	black adult males includes 76 males over 60
1749	651	701	460	556	≤16	black	black adult males includes 41 males over 60
1756	672	695	468	443	≤16	black	black adult males includes 68 males over 60
1771	932	1085	568	552	≤16	black	black adult males includes 42 males over 60
1786	896	1207				slaves, negroes	

Note: From United States Bureau of the Census (1909), checked against Brodhead (1856–1887). Some discrepancies in the numbers appearing in Kruger (1985) and Foote (1991) have been corrected (from Volume 1, Part 1 [Rankin-Hill et al. 2009:Table 18]).

and 128 (depending on whether ambiguously sexed individuals were included). The skeletal sex ratio was near 128 individuals assigned to the Early Group and decreased for those assigned to the Middle Group to near 100. Sample size probably played a role, because the early group of sexed adults assigned an age consisted of only 15 individuals. After 1760, skeletal sex ratios were much higher. For individuals assigned to the Late-Middle Group, the sex ratio skyrocketed to 200 or 230, depending on whether ambiguously sexed individuals were included. For individuals assigned to the Late Group, dating after 1776, the sex ratio decreased to near 146.

Interpreting skeletal sex ratios is especially complicated by the fact that, among other things, it registers the sex ratio of adults that died and does not factor in the living. One potential interpretation of the disparity between skeletal and historical sex ratios is that men were dying at higher rates than women. This explanation is plausible given the range of dangerous activities performed by men in New York City. Men may have been exposed to greater hazard rates that increased their mortality rates. Another potential explanation is that men were more likely to be buried in the portion of the African Burial Ground that was excavated. Future GIS analysis planned by the researchers may help to resolve this possibility. Another possible explanation is that because the high skeletal sex ratios occurred in the latter half of the eighteenth century, military activities associated with the Revolutionary War or hazards associated with noxious industries around the Collect Pond may have been responsible for the comparatively large number of male burials after 1760. Perry, Howson, and Holl (2009d) note that aspects of burials for many of the Late Group males buried without coffins, for instance, could be attributed to conditions related to the Revolutionary War.

Child-to-Female Ratio

Another potential measure of fertility is the child-to-female ratio. The larger the ratio, the more children for every female. In a stable population, high child-to-female ratios signal greater fertility. New York was not a closed system, however, and enslaved laborers were frequently imported. Hence, changes in the child-to-female ratio are difficult to interpret without detailed information on the age and sex of imported enslaved laborers. Nonetheless, the child-to-female ratio derived from historical records was at or below a value of 1 prior to the early 1740s (Figure 71; see Table 23). During the 1740s, the child-to-female ratio shot up to 2, but this appears to be linked to the importation of large numbers of enslaved female children. The child-to-female ratio remained high in the 1750s but returned

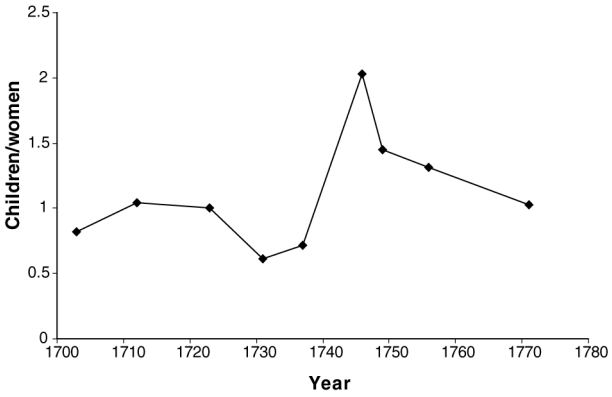


Figure 71. African child-woman ratio in eighteenth-century New York City (developed from information in Volume 1, Part 1 [Blakey, Rankin-Hill, Goodman, et al. 2009:Figure 143 and Table 97]).

to near 1 during the 1770s. The child-to-female ratio could indicate below-replacement levels of fertility (Blakey, Rankin-Hill, Howson, et al. 2009).

Ratios calculated using skeletal data present a somewhat different picture than those calculated from historical data. New York African Burial Ground skeletal child-to-female ratios were higher in general than historical child-to-female ratios. Overall, the skeletal child-to-female ratio was 1.9 or 2.3, depending on whether subadults that could not be assigned ages were included in the calculation. This could suggest higher levels of fertility than indicated by historical records, the unrecorded importation of large numbers of children (perhaps in order to evade taxes), or especially high hazard rates for children. Skeletal child-to-female ratios peaked during the middle period, when historical child-to-female ratios also peaked, suggesting that the surge in numbers of enslaved female children during the 1740s was reflected by the skeletal sample. Because one would expect young children and infants to be underrepresented to a greater degree than female adults, it seems that elevated child-to-female ratios during all periods indicates greater numbers of children within the population than are suggested by historical records, elevated mortality for children, or both factors.

Comparison with Trinity Church Records

Rankin-Hill et al. (2009) compared the adult age-at-death distribution for the New York African Burial Ground sample to historical records from Trinity Church as a proxy for European mortality in eighteenth-century New York. The two profiles appear to be substantially different (Figure 72). For most age groups below the age of 55, male Trinity Church burials occurred at lower rates than New York African Burial Ground burials. Male Trinity Church burials occurred at higher rates for only two age groups: 25–29 years and greater than 55 years. Rankin-Hill et al. (2009:127) suggest that the bump in European male deaths between the ages of 25 and 30 could represent "the in-migration of young men, who would have constituted a larger segment of the population, would have been subjected more frequently to interpersonal violence, and proportionally would have died in greater numbers." Almost one-third of Trinity Church adults lived past the age of 55, however, suggesting that Europeans were much more likely than Africans to reach old age. By contrast, only around 6 percent of New York African Burial Ground males lived past the age of 55. Between the ages of 20 and 29 and over 55, adult Trinity Church female burials occurred relatively more frequently than female burials at the New York African Burial Ground. New York African Burial Ground females were more likely than Trinity Church females to die between the ages of 30 and 34.

Rankin-Hill et al. (2009) also compared New York African Burial Ground and Trinity subadult age-at-death distributions (Table 24). They note that young children typically are underrepresented in both historical records and archaeological cemetery excavations. The death of young children and infants is less often recorded in historical documents, and young children and infants are less likely than older individuals to be well preserved. Burials of infants and young children less than 5 years old were proportionally more numerous in the Trinity Church records than New

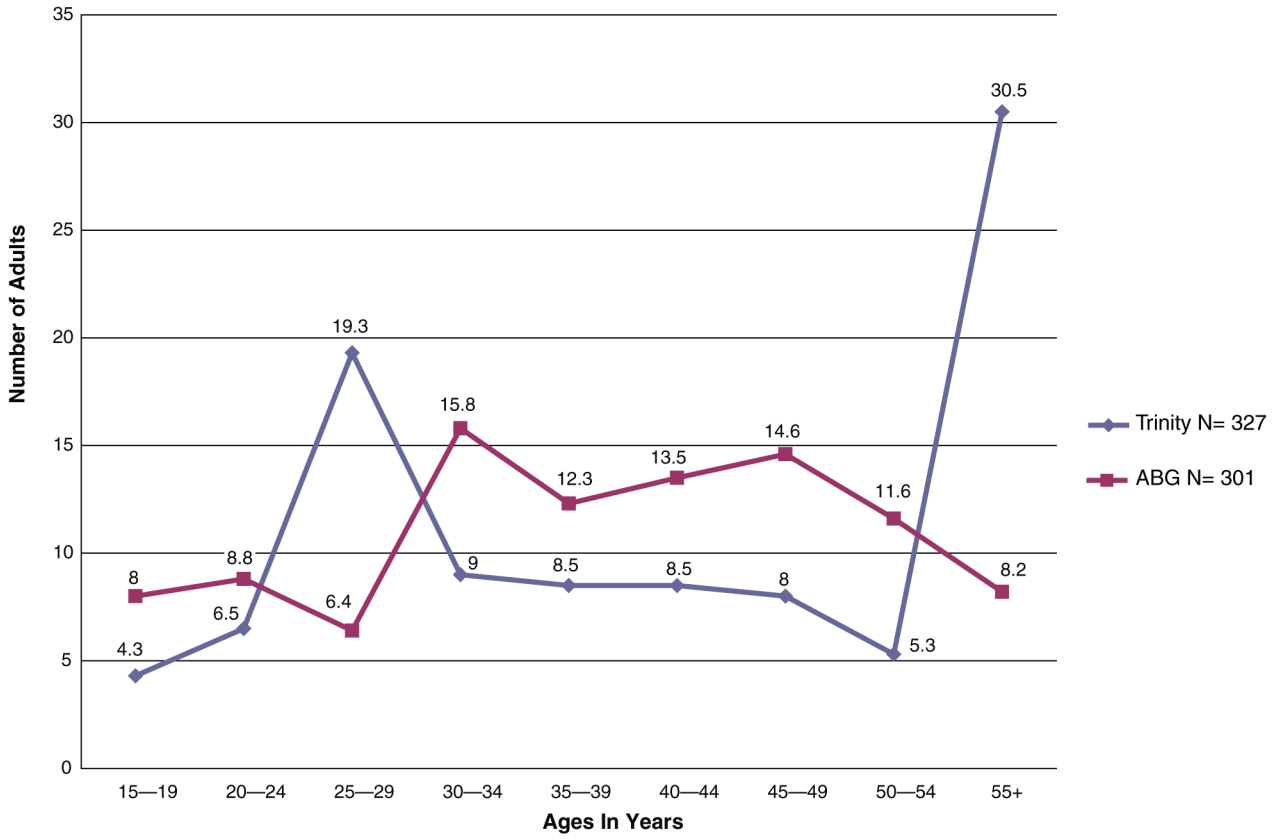


Figure 72. Adult mortality for New York African Burial Ground and Trinity Church (from Volume 1, Part 1 [Rankin-Hill et al. 2009: Figure 52]).

Table 24. NYABG and Trinity Church Subadult Mortality

Age	NYABG	Percent Subadults	Trinity	Percent Subadults
0–5	98	75.4	119	85.0
5–9	19	14.6	15	10.7
10–14	13	10.0	6	4.3
Total	130	100.0	140	100.0

Note: From Volume 1, Part 1 (Rankin-Hill et al. 2009:Table 20).

York African Burial Ground burials. Rankin-Hill et al. (2009) imply that the difference could simply derive from the fact that young children and infants are more underrepresented in archaeological samples when compared to historical records. The overall mortality regimes for both groups "were almost identical in pattern with high early-childhood mortality and a dramatic decline for ages 5–9 and 10–14" (Rankin-Hill et al. 2009:128).

Mean Age at Death

To compare mortality between sites, Rankin-Hill et al. (2009:Table 22) compared the mean age at death for males and females from the New York African Burial Ground, the Philadelphia First African Baptist Church, the Cedar Grove Baptist Church cemetery, Site 38CH778 in Charleston, the Catoctin Furnace cemetery, the St. Peter Street Cemetery

in New Orleans, and the Newton Plantation burials in Barbados. For the New York African Burial Ground, the mean age at death was 38.0 for males and 35.9 for females. Along with females from Catoctin Furnace and St. Peter Street Cemetery, New York African Burial Ground females were among the youngest to die. Males died youngest at 38CH778, but New York African Burial Ground males also died at a comparatively young age. On average, New York African Burial Ground adults died at younger ages (36.9) than most compared samples. Charleston, South Carolina, adults died at the youngest ages. At the New York African Burial Ground, the overall mean age at death for 301 aged adults and subadults was 22.3. The mean age at death for New York African Burial Ground subadults was 3.32, as subadult mortality is skewed towards the younger ages.

Interestingly, there is some apparent change through time at the New York African Burial Ground in mean age at death. Between the early and late-middle periods (pre–Revolutionary War), the adult-male mean age at death remained fairly steady, whereas the adult-female mean age at death steadily increased. The subadult mean age at death declined during the pre–Revolutionary War era. During the late period, or after 1776, adult-male and adult-female mean ages at death were roughly equivalent, and subadult mean age at death increased. Adult-male mean age at death hovered around 39 for the Early, Middle, and Late-Middle Groups but declined to 37 for the Late Group. By contrast, female mean age at death climbed from 33 during the early period to 42 during the late-middle period. During the late period, female age at death dropped to 37. These temporal changes in mean age at death may reflect basic demographic changes taking place over time. During the pre–Revolutionary War era, women died at progressively older ages over time, and subadults died at progressively younger ages over time, but men were little affected. After 1776, adult male and adult female mean ages at death dropped, and subadult mean ages at death increased, trends that could reflect some of the more dramatic changes that took place during or after the Revolutionary War. The dramatic changes in mean age at death after the Revolutionary War could indicate high hazard rates associated with the war, the influx of large numbers of relatively young fugitives into New York City, or both processes (see Chapter 7).

Survivorship and Life Expectancy

Rankin-Hill et al. (2009) compared New York African Burial Ground survivorship and life expectancy to survivorship and life expectancy for First African Baptist Church, Cedar Grove, and model populations from two of Weiss's (1973:175, 118) model life tables, MT 30.0–60.0 and MT 15.0–45.0 (Figures 73 and 74) Rose and Santeford (1985b) reported that MT 30.0–60.0 and MT 15.0–45.0 were the most comparable to the Cedar Grove mortality experience. MT 30.0–60.0 refers to a model table with adult mortality level of 30.0 and a juvenile level of 60.0. Rankin-Hill et al. (2009) acknowledge the many problems associated with interpreting life tables, including problems with aging skeletons and the basic assumption of model life tables: (1) population stability, (2) nonselective mortality, and (3) homogeneity in risks (Wood et al. 1992). Most prehistoric populations violate one or more of the assumptions of life tables, and Rankin-Hill et al. (2009) observe that none of the assumptions is met by the New York African Burial Ground. They show that the population of New York Africans changed dynamically over time and was continuously increased through forcible in-migration. Mortality was certainly selective, but there is no reliable historical data on the health status of living individuals for different age groups. There also likely was considerable heterogeneity in risks, given heterogeneity in the population and in life experiences. Appreciating these problems, the researchers nevertheless believe it is instructive to examine differences between life tables, particularly in light of historical information on the enslaved African population in New York.

Interestingly, survivorship was higher for the New York African Burial Ground sample for all ages below 55. Infant mortality also had the least impact on survivorship for the New York African Burial Ground sample. Cedar Grove had the lowest survivorship for all age groups, with more than 50 percent of individuals dying as subadults. The apparently elevated survivorship of the New York African Burial Ground is curious, given the fact that the First African Baptist Church was by some accounts a relatively healthy population overall (Steckel and Rose 2002). The researchers caution that the elevated survivorship in the New York African Burial Ground sample, however, could have resulted from continuous in-migration of African adults imported at older ages. In the aggregate, this would give the appearance that adults survived more often

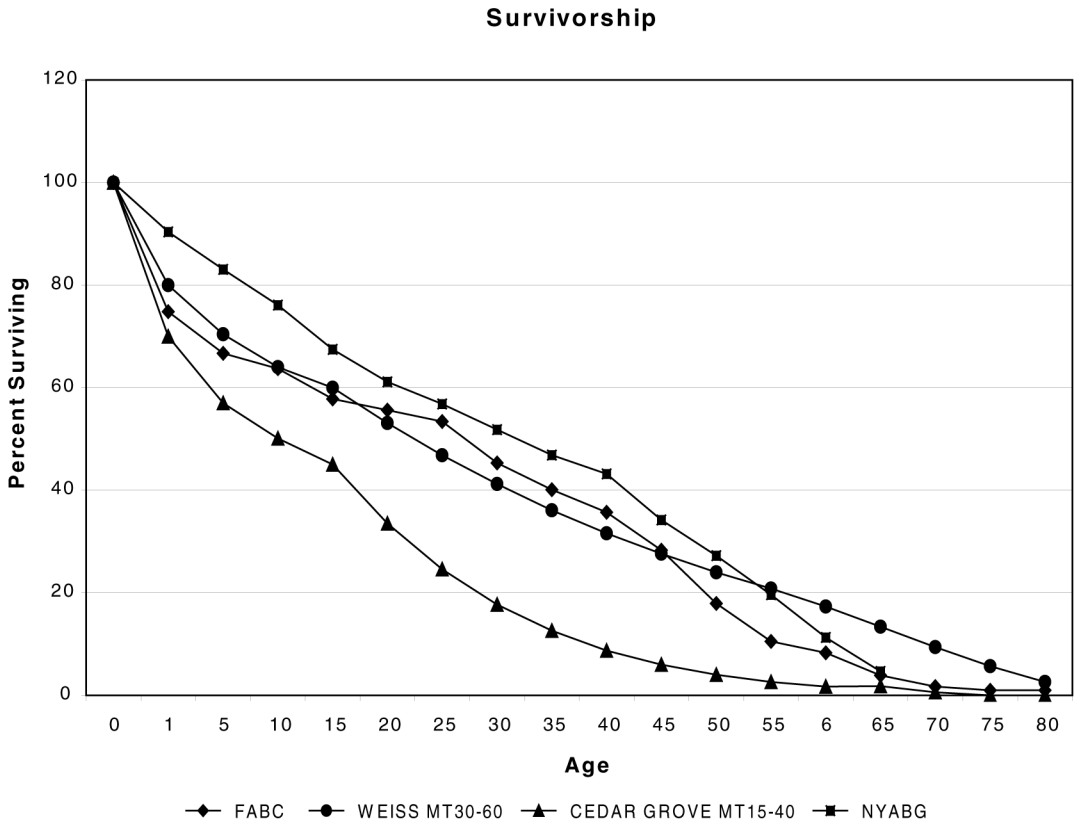


Figure 73. Comparison of survivorship at the New York African Burial Ground to other samples (from Volume 1, Part 1 [Rankin-Hill et al. 2009: Figure 55]).

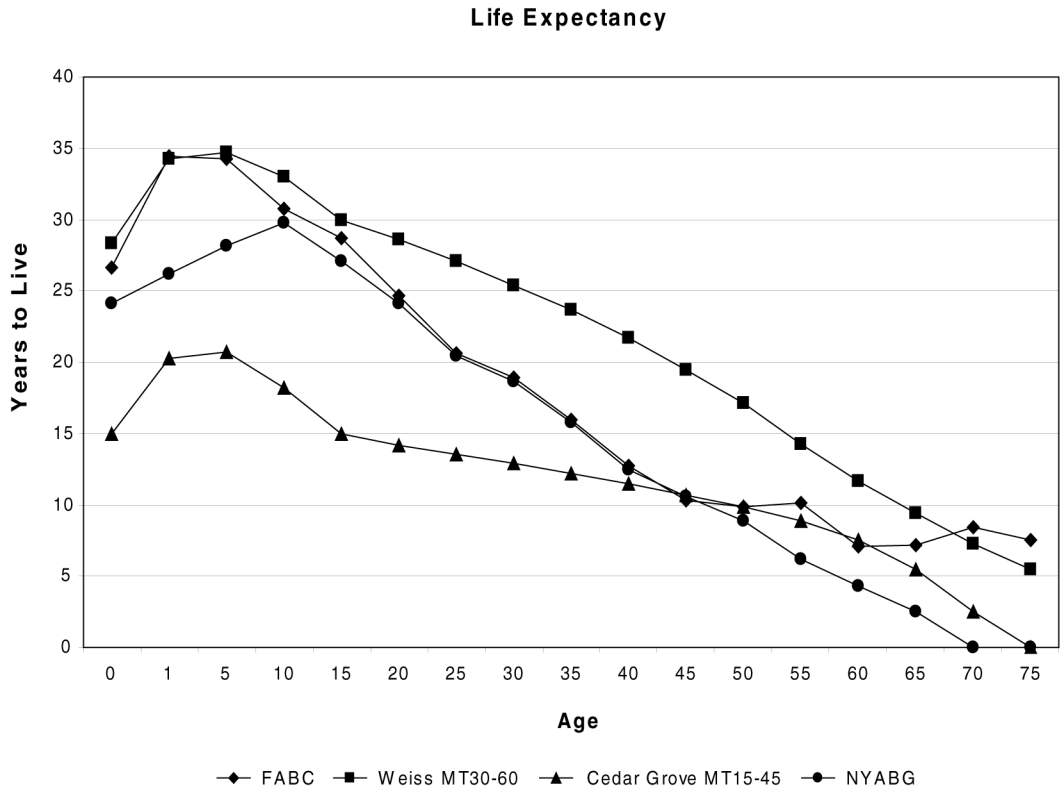


Figure 74. Comparison of life expectancy at the New York African Burial Ground to other samples (from Volume 1, Part 1 [Rankin-Hill et al. 2009: Figure 56]).

Table 25. New York African Burial Ground Female Life Table

Females Age Interval (In Years) (x)	No. of Deaths (Dx)	% of Deaths (dx)	Survivors Entering (lx)	Probability of Death (qx)	Total Years Lived Between X and X+5 (Lx)	Total Years Lived After Lifetime (Tx)	Life Expectancy (e0x)
15–19	8	11.59	100.00	0.1159	471.014	2,221.014	22.21
20–24	5	7.25	88.41	0.0820	423.913	1,750.000	19.80
25–29	4	5.80	81.16	0.0714	391.304	1,326.087	16.34
30–34	17	24.64	75.36	0.3269	315.217	934.783	12.40
35–39	9	13.04	50.72	0.2571	221.014	619.565	12.21
40–44	5	7.25	37.68	0.1923	170.290	398.551	10.58
45–49	8	11.59	30.43	0.3810	123.188	228.261	7.50
50–54	5	7.25	18.84	0.3846	76.087	105.072	5.58
55+	8	11.59	11.59	1.0000	28.986	28.986	2.50
Total	69	Crude Mortality Rate: 45.02					

Note: From Volume 1, Part 1 (Rankin-Hill et al. 2009:Table 26).

Table 26. New York African Burial Ground Male Life Table

Males Age Interval (In Years) (x)	No. of Deaths (Dx)	% of Deaths (dx)	Survivors Entering (lx)	Probability of Death (qx)	Total Years Lived Between X and X+5 (Lx)	Total Years Lived After Lifetime (Tx)	Life Expectancy (e0x)
15–19	7	6.86	100.00	0.0686	482.843	2,441.176	24.41
20–24	10	9.80	93.14	0.1053	441.176	1,958.333	21.03
25–29	7	6.86	83.33	0.0824	399.510	1,517.157	18.21
30–34	10	9.80	76.47	0.1282	357.843	1,117.647	14.62
35–39	12	11.76	66.67	0.1765	303.922	759.804	11.40
40–44	18	17.65	54.90	0.3214	230.392	455.882	8.30
45–49	17	16.67	37.25	0.4474	144.608	225.490	6.05
50–54	15	14.71	20.59	0.7143	66.176	80.882	3.93
55+	6	5.88	5.88	1.0000	14.706	14.706	2.50
Total	102	Crude Mortality Rate: 40.96					

Note: From Volume 1, Part 1 (Rankin-Hill et al. 2009:Table 25).

in New York into later adulthood, when instead, they were more often forcibly imported as adults.

In comparison to survivorship curves, life-expectancy trends suggest different trends in mortality (Tables 25–27). The Cedar Grove population had lower life expectancy than the other samples for most ages, but individuals surviving to late adulthood, past the age of 45, maintained life expectancies on par or higher than the other populations. The Weiss MT 30.0–60.0 model population had the highest life expectancy. For the first 5 years of life, First African Baptist Church and Weiss life expectancies were very similar. The First African Baptist Church trend, however, departed from the Weiss model at around age 10, and at that point closely followed the New York African Burial Ground trend. The New York

Table 27. New York African Burial Ground Life Table

Age Interval [a] (x)	No. of Deaths (Dx)	% of Deaths (dx)	Survivors Entering (lx)	Probability of Death (qx)	Total Years Lived Between X and X + 5 (Lx)	Total Years Lived After Lifetime (Tx)	Life Expectancy (e0x)
0–5 months	29	9.63	100.00	0.0963	9.518	2420.316	24.20
6–12 months	22	7.31	90.37	0.0809	8.671	2410.797	26.68
1–2	21	6.98	83.06	0.0840	90.664	2402.126	28.92
3–4	26	8.64	76.08	0.1135	358.804	2311.462	30.38
5–9	19	6.31	67.44	0.0936	321.429	1952.658	28.95
10–14	13	4.32	61.13	0.0707	294.850	1631.229	26.68
15–19	15	4.98	56.81	0.0877	271.595	1336.379	23.52
20–24	15	4.98	51.83	0.0962	246.678	1064.784	20.54
25–29	11	3.65	46.84	0.0780	225.083	818.106	17.46
30–34	27	8.97	43.19	0.2077	193.522	593.023	13.73
35–39	21	6.98	34.22	0.2039	153.654	399.502	11.67
40–44	23	7.64	27.24	0.2805	117.110	245.847	9.02
45–49	25	8.31	19.60	0.4237	77.243	128.738	6.57
50–54	20	6.64	11.30	0.5882	39.867	51.495	4.56
55+	14	4.65	4.65	1.0000	11.628	11.628	2.50
Total	301	Crude Mortality Rate: 41.32					

Note: From Volume 1, Part 1 (Rankin-Hill et al. 2009:Table 24).
[a] In years unless otherwise indicated.

African Burial Ground trend is somewhat anomalous, because the peak life expectancy (around 30 years) was reached at the age of 10, whereas the peak life expectancy for the other samples occurred by the age of 5. Peak life expectancies for the Weiss model and the First African Baptist Church were near 34 years of age. The Cedar Grove population had the lowest peak life expectancy, only around 21 years. In comparison, peak life expectancy calculated for a nineteenth-century almshouse cemetery in Rochester, New York, exceeded 50 years (Higgins et al. 2002). Interpretation of life expectancy and survivorship at the New York African Burial Ground, however, is highly complicated by a nonstable, heterogeneous population that was continuously added to through forcible migration. The fact that life expectancy peaked at an older age for the New York African Burial Ground than for compared samples may reflect the fact that many individuals were not born in New York.

Conclusions

The effects of forcible labor on the New York African Burial Ground individuals were marked. Performing strenuous and repetitive tasks, which may have often involved the lifting and carrying of heavy loads, led to muscle hypertrophy and degenerative joint disease among male and female Africans. Osteoarthritis and osteophytosis were common and increased with age, as expected. Sexual division of labor appears to have been registered by the musculoskeletal effects of work. Whereas men experienced osteoarthritis most frequently in the elbow, women were affected most often in the wrists. Stress fractures associated with load bearing occurred most commonly in the upper spine for women and in the lower spine for men. Evidently, men were involved in heavy lifting, tool-using tasks, and other strenuous activities that stressed the lower spine and arms, whereas women more often

performed sewing, weaving, and domestic tasks which also appear to have involved the frequent manipulation of heavy loads. Women and children also may have often carried heavy loads on their heads. The excessive physical strains caused by forcible labor in Manhattan would have been made all the worse as a result of nutritional deficiencies and chronic infections which the researchers demonstrated to be rampant in other studies. Nutritional deficiency and chronic infection would have diminished work capacity and greatly increased the discomfort and suffering of enslaved laborers (see Chapter 5).

Paleodemographic and historical research showed that the eighteenth-century African-descended population of New York was at below-replacement values and increased by virtue of importation rather than fertility. To the researchers, fractured families and strictures on relationships among enslaved Africans impeded formation of nuclear families and reduced the likelihood of childbearing or adequate child rearing. Infant mortality was high. Multiple factors, including lead poisoning, poor nutrition, and negative attitudes toward childbearing, could have contributed to infant mortality. Adult mortality was also high, but mortality differed for males and females. Either adult females tended to die at younger ages than adult males, or younger females were more numerous than younger males. The overall adult sex ratio derived from skeletal evidence was 146, meaning there were more males than females in the sample. The sex ratios obtained from the skeletal data differed from those found in the historical records, an interesting point that deserves further study. The difference could relate to variation in male and female mortality or variation in the burial location of males and females. Child-to-female ratios, which averaged about two children for every adult woman, also differed somewhat from the historical data, suggesting that there may have been more enslaved children in New York than historical records suggest or that, relative to adult females, children suffered especially high mortality.

Mortality was high for enslaved Africans. Comparisons to Trinity Church burial records suggest that Europeans had different mortality profiles, although systematic differences between historical and skeletal records make comparisons difficult. Violence, trauma, and stress associated with frontier conditions led to high death rates for young European males, and infant mortality was high in both groups. Europeans appear to have lived to older ages than enslaved Africans, suggesting that cumulative stresses of enslavement had a strong dampening effect on life expectancy.

In short, the researchers have shown that, in combination with disease, poor nutrition, and unhealthful living conditions, heavy workloads created a population under tremendous physiological stress. Population increase through time was likely the result of in-migration more than fertility. Children were especially stressed and were forced into hard labor at young ages. Disruption of traditional kinship structures, family life, and procreation conspired to reduce fertility and probably increased child mortality. Nonetheless, information on the relative location, use, and marking of graves, along with the burial of personal items with the deceased, suggest that New York Africans continued to build and strengthen family in the face of dehumanizing adversity. Building on this body of information, future research may combine demographic models, historical records, and skeletal data from a variety of sources to further investigate the demographic variables affecting the New York African Burial Ground population. Variation in spatial proximity, artifactual content, and evidence for natality at the New York African Burial Ground could also be examined to determine if further spatial or temporal patterning in work-related stress, family ties, or mortality can be discerned.

Chapter 7

The Assertion and Maintenance of Human Dignity

Identifying modes of resistance to enslavement was one of four major research themes identified by the researchers (Blakey 2009a:13; Blakey 2009b:43; Howson, Bianchi, and Perry 2009:5) (see Chapter 1). When the research was first designed in 1993, models of domination and resistance were popular in exploring the power relationships between hegemonic and oppressed peoples (e.g., Miller et al. 1989). Most considerations of domination and resistance focus mainly on resistance, as resistance is the mode of conduct investigators often ascribe to people under study. For enslaved Africans in the North American colonies, oppression began with enslavement, forced labor, the denial of rights and freedoms, ridicule, and restricted access to goods, services, food, shelter, or creature comforts. Attempts at domination included the formation of legal restrictions, prohibitions, and status designations but also the daily dehumanizing effects of interactions between the enslaved and enslavers.

Blakey (2009a:4–5) notes that

> In the main, Africans in colonial New York were enslaved, not free laborers, and thus experienced a particularly intensive contestation of their humanity by Europeans who were intent upon objectifying Africans as property. It is now obvious that in New York, as throughout the slaveholding Americas, enslaved Africans were arbitrarily stripped of names and renamed, family members were separated to be sold apart, social institutions and religious practices were disallowed or went underground, the use of African languages was suppressed, and the cultural history of those Africans was denigrated by slaveholders.

To the researchers, understanding the lives and lifestyles of enslaved Africans in colonial New York goes far beyond understanding the interplay of domination and resistance. Not all behaviors can be summed up as acts of domination or resistance. Rather, interactions of African New Yorkers with indentured servants, enslavers, and other individuals were guided by the assertion and maintenance of human dignity and the pursuit of a higher quality of life. Human dignity was not defined in reaction to enslavement; it was central to the formation of ideology and identity and the performance of daily activities, whether enslaved or free (Medford 2009:xx; Medford and Brown 2009b:1). Strategies for resistance were among much larger sets of strategies aimed ultimately at preserving human dignity and improving the quality of life among African New Yorkers.

As Harris (2003:12) has noted, "enslavement dominated every facet of colonial black New Yorkers' lives—the work they did, their ability to form families, their religious practices, even how they defined themselves. But black men and women did not simply acquiesce to enslavement or to an inferior racial status. Throughout Dutch and British slavery, enslaved Africans demonstrated through their labor, their resistance to bondage, and their creation of families and communities that the racial stereotypes of inferiority promulgated by Europeans had no basis in reality." The enslaved African New Yorkers responded to their captivity in varied ways and bore the scars of their bondage on their bodies. Interpreting trauma on human skeletons can be difficult, however. Bioarchaeologists stress that the causes of trauma are numerous. In different archaeological contexts, trauma evident in skeletal remains could result from accidents as well as violent behaviors such as homicide, combat, or other acts of conflict (Goodman and Martin 2002:39); without historical documentation, it can be impossible to identify the cause. In the New York African Burial Ground sample, the apparent association of trauma with mortality and the condition of enslavement suggests the possibility that violent behaviors

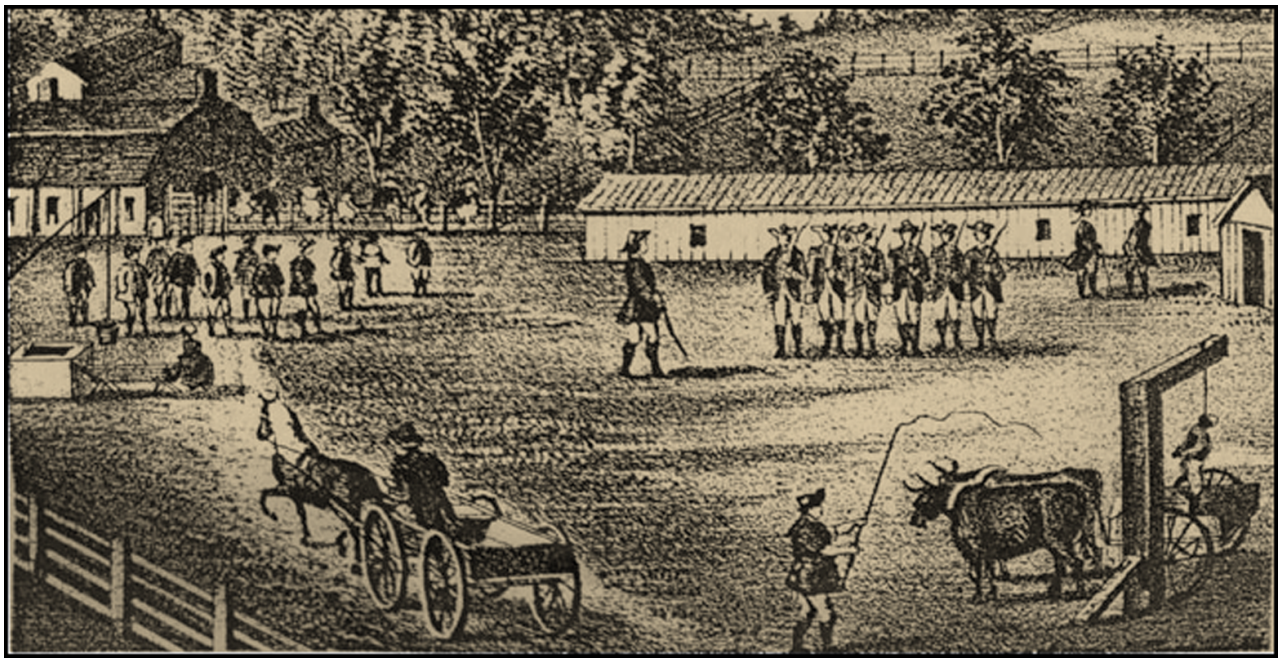


Figure 75. Execution of a New York African on the Common (from Valentine 1860) (from Volume 3 [Medford and Brown 2009c:Figure 21]).

were sometimes associated with trauma. Multiple fractures in multiple regions of the body for a number of individuals suggests the occurrence of either severe accidents, such as accidents involving heavy equipment (e.g., mill accidents or cart accidents), or brutal acts of violence against enslaved individuals. Although the particular circumstances under which the individuals at the African Burial Ground suffered these traumas remain unknown, it is possible that some were inflicted as a response to acts of resistance.

Resistance to the conditions of enslavement was common in Manhattan. Enslaved people escaped or attempted escape, participated in rebellions, stole or destroyed property, killed or planned to kill their tormenters, gathered, conspired, and celebrated their distinct and shared African heritages (Medford and Brown 2009c). The formation of "slave codes" and institutionalized racism testifies to the tension between the enslaved and enslavers and documents the repeated attempts of enslavers to dominate the enslaved. Clearly, enslavers struggled to maintain power and control over enslaved people and were fearful of losing control. In general, the restrictions placed on the rights and privileges of enslaved Africans worsened over time as officials and government bodies attempted to maintain control over an increasingly intractable situation—controlling large numbers of enslaved Africans who worked all over the city for different employers and who regularly interacted with free blacks, Native Americans, and disgruntled European servants (Medford and Brown 2009c; Medford, Brown, and Carrington 2009:26; Medford, Brown, Carrington, et al. 2009e:75; Medford, Brown, Heywood, et al. 2009b:13).

It has been historically documented that enslaved Africans were brutally punished for breaking New York City's highly restrictive laws (Figure 75). Enslaved Africans were burned at the stake, broken on the wheel, hanged, whipped, beaten, and murdered. Some registered offenses, even those whose legal punishments entailed execution, were occasionally pardoned owing to the economic dependence of Euroamericans on enslaved labor (Medford and Brown 2009c:92–96; Medford, Brown, Heywood, et al. 2009:14).

Domination of Africans and African Americans reduced (but did not eliminate) opportunities for interaction, exchange, commerce, and procreation. In its various forms, domination promoted more unhealthful living conditions for enslaved laborers. It is expected, then, that domination should be registered physically in multiple ways, as physiological stress, depressed fertility, and skeletal trauma (see Chapters 5 and 6).

Enslaved and free Africans resisted domination at every level and, despite oppression, continuously sought freedom and opportunity. Enslaved Africans "found ways to keep their humanity at the forefront, always through a stubborn determination to reject any limitation on their exercise of those rights reserved

to humankind" (Medford 2009: xxviii–xix). Enslaved Africans in New York congregated and interacted in large numbers; assembled in the streets, taverns, tippling houses, dramshops, burial grounds, churches and schools; openly rebelled; contested authority in court; stole what they were not provided; burned buildings; assaulted and murdered enslavers and authority figures; and escaped captivity (Medford and Brown 2009c). The impacts of widespread racism and inequality during and after the Revolutionary War is cogent evidence for the deep hypocrisy of the nation's foundational myths—equality and freedom for all—and illustrates some of the contradictions of race, slavery, and liberty in the formation of the United States of America (see Chapter 3).

American Revolutionaries sought to win freedom from "British tyranny" but were unwilling to allow the same rights and freedoms to people of African descent. After the war, people of African descent that remained in New York City grew increasingly assertive of their own interests and openly resisted the discriminatory and repressive political economy of New York City. More than before, free and enslaved people of African-descent in post–Revolutionary War New York City openly resisted domination by verbally asserting themselves, taking advantage of Euroamericans when able, subverting and contravening pre-revolutionary racial roles through dress and manner, and establishing independent African American institutions—theaters, churches, schools, newspapers and benevolent societies. Mainly, African-descended individuals in New York sought to obtain what others would deny them (Foote 2004; Harris 2003; Hodges 1999; Medford and Brown 2009c; White 1991, 2005).

This chapter discusses domination and resistance as fundamental components of everyday life for enslaved and free Africans in colonial America. As Ira Berlin (1996:252) has observed, "resistance to the new regime began at its inception, as slaves clandestinely maintained their African names even as they answered their owner's call." Diasporic studies are beginning to address the multiple and often subtle roles enslaved African agency played in forming the colonial world and resisting the harsh and inhumane conditions pressed upon them. This chapter explores the historical, social, political, and cultural factors that fueled the tensions between the enslaved and their enslavers in New York during the period the African Burial Ground was in use and explores the world in which the individuals buried in the African Burial Ground struggled to assert their human dignity. This chapter reviews concepts of slavery and enslaved status in Africa and the New York, summarizes historical information, and discusses the bioarchaeological data reflecting issues of domination and resistance.

Concepts of Slavery and Enslaved Status in Africa and New York

As in other parts of the colonial world, various forms of slavery were common in West Africa and West Central Africa during the era of the Atlantic trade in enslaved Africans. Most enslaved Africans forcibly migrated by European traders were initially enslaved by Africans but were enslaved according to different systems of slavery. The many people involved in the transatlantic trade—enslaved laborers, African slave traders, European slave traders, African enslavers, European enslavers—had different expectations of what slavery entailed. The status of enslaved laborers and the freedoms permitted or denied the enslaved were negotiated differently in different cultural contexts, and how or why people could be enslaved or manumitted varied among different regions and different time periods. In some times and places in the Atlantic World of the seventeenth and eighteenth centuries, enslaved laborers shared many liberties with free people, including the right to own property, to testify against free people in court, to perform economic transactions, engage in commerce, and to be freed. These were in fact the rights permitted to enslaved laborers in seventeenth-century Dutch New Amsterdam as well as enslaved laborers in some contemporary African contexts (Medford, ed. 2009).

The conditions of slavery varied in the Americas according to national affiliation of enslavers, the labor needs of local industries, political administration, and time. In New York, conditions for enslaved laborers generally worsened over time, particularly with the transfer of political power from the Dutch to the English, but specific pathways to resistance and freedom opened and closed over time with changing economic and political conditions. In eighteenth-century British New York, slavery came to be considered hereditary, fundamental legal and commercial rights previously allowed to enslaved laborers were restricted, and most pathways to freedom were blocked by social and legal institutions (Medford, ed. 2009).

Enslaved Africans came from diverse societies with mores that conditioned their understanding and experiences with slavery. Depending on their prior

experience with slavery, enslaved Africans had the general expectation that they could obtain wealth, freedom, or change status through a variety of social or legal mechanisms. Foote (1991:206) has noted that enslaved Africans in New York with Akan-Asante backgrounds "would have found little odd in the local practice of enslaving strangers, or in the exchange of persons as articles of trade, or in the assignment of status by matrilineal descent, for slavery on the Gold Coast displayed similar features." At the same time, Akan-Asante normative expectations of their own rights and responsibilities and those of their enslavers differed from contemporary Europeans in important ways (Foote 1991:207). Akan-Asante were accustomed to "well-articulated laws prescribing the master-slave relation as well as the 'humane' uses and treatment of slaves" (Foote 1991:207).

In essence, enslaved Africans with Akan-Asante backgrounds, such as enslaved Coromantees (Akan), expected to be treated humanely, justly, and "to be rewarded for faithful service" (Foote 1991:212). The fact that these expectations were rarely, if ever, met led to great resentment among enslaved Coromantees. Foote (1991:207) has argued, in fact, that the 1712 revolt was compelled by "hard usage" that enslaved Pawpaws and Coromantees—given their background—felt was especially unjust.

Some examples of the varieties of experience within African slavery can be found in West and West Central Africa. Nonelite Kongolese were divided into two groups: *mavata* (free villagers) and *avika* (enslaved laborers). In Ndongo, a distinction was made between *ana murinda* (free villagers), *ijiko* (state-held enslaved laborers), and *abika* (privately held enslaved laborers). Other kingdoms in West Central Africa appear to have operated according to similar distinctions (Medford, Brown, Heywood, et al. 2009b:18). In West Africa, a continuum of statuses among Akan-Asante groups defined the roles of enslaved laborers, what they were entitled to, and how they could be treated. *Akyere* were enslaved criminals awaiting capital punishment. *Odonko* were foreign-born enslaved laborers who, lacking the protection of kinship ties, could be treated as dehumanized commodities (Foote 1991:208). *Awowa* were lineage members whose labor was used "to work off a debt or as collateral against a debt" (Foote 1991:209). *Awowa* who were not redeemed by their lineage, however, could become *akao pa*, a status similar to *odonko*. Enslaved laborers, including *odonko* and *akao pa*, could inherit part of their enslavers' property and were "entitled to land as well as to the fruits of [their] labor" (Foote 1991:209).

As Piersen (1996:9) has explained and these examples demonstrate, "West African slaves were treated as people, not property. Muslim-owned enslaved laborers were as likely to serve as bureaucrats or professional soldiers as agricultural laborers. They made excellent officials and were commonly appointed military commanders because as slaves they owed allegiance to the ruler alone; they had no conflicting loyalties to subservient nobles or particular regions or peoples. Moreover, as outsiders lacking freedom, slave officeholders and soldiers could not seize power and thus weaken imperial rule." Typically, "Africans could be reduced to slavery as prisoners of war, for violating a custom, for committing a crime, or for being unable to settle a just debt" (Page 1997:xxv; see also Medford, ed. 2009). Inikori (1999:68) has argued that many Africans forcibly migrated to the Americas "had no previous experience of bondage, not even serfdom." The statuses of enslaved laborers in Africa were entirely different from those conferred in the Americas. To Inikori (1999:68), "the socioeconomic conditions in Africa were much closer (in many cases even superior) to those of serfs in medieval Europe than to those of chattel slaves" in colonial America. There were substantial differences between enslaved laborers and indentured servants in the Americas. As Eltis (2000:255) has observed, indentured servants "shared culture, language, a system of government, and the possibility of advancement with an elite that controlled the colonized territory; [enslaved Africans] could expect nothing but a life of hard labor and attenuated self-possession." For most of the population interred at the New York African Burial Ground, many of whom were most likely born in West and West-Central Africa according to historical and bioarchaeological evidence (Goodman et al. 2009), the harsh conditions of slavery in colonial New York would have conflicted strongly with their cultural expectations.

Some of the most brutal forms of slavery were enacted in the colonial-era Americas. Rights initially permitted enslaved laborers eroded over time as enslaved people were subject to increasingly harsh treatment. Slavery in the colonial-era Americas also became increasingly racialized over time as enslavement was associated more and more with people of African descent. People whose physical appearance resembled Africans, such as captured European prisoners of war, were sometimes enslaved on the basis

of their complexion alone. In the British colonies, people of African descent were generally considered to be enslaved unless they could prove their own status to be free. Even then, it was not uncommon for claims of freedom to be challenged and for free Africans to be reenslaved (Harris 2003; Medford, ed. 2009; Wilson 1994).

According to some scholars, the system of slavery in New Amsterdam under the Dutch was a less repressive one than later systems. The legal standing of Africans under the Dutch system was considerably greater than it came to be under the British system.[1] Enslaved Africans had more rights than Jewish people under the Dutch system (McManus 1966:12; Stokes 1915–1922:4:148). According to Rothschild (1990:88), "blacks were free to intermarry with whites, attend white churches, own property, and had the same standing in courts as whites." Enslaved laborers were also more likely to obtain partial or complete freedom under the Dutch system.[2] Higginbotham (1978:106, 114) has even suggested that slavery as it came to be known was not legally instituted until England became the colonial power. Under the British system, the rights of enslaved laborers were more severely restricted than under the Dutch, and the prospect of manumission, even at the behest of enslavers, became increasingly unlikely, as the government issued more numerous and harsher laws restricting the rights of enslaved peoples.

New York "Slave Codes"

A major component of European efforts at dominating enslaved laborers was the so-called "slave codes." Virginia was the first of the British colonies to establish comprehensive "slave codes" (Harris 2003:16). Other colonies followed suit, although in more piecemeal fashion. In New York City, numerous laws were passed between the 1680s and 1730s to control the city's population of enslaved laborers. Comprehensive "slave codes" were passed in 1702 and 1730. Overall, these repressive laws had the effect of denying basic rights and privileges, racializing slavery, inhibiting manumission, and making slavery a hereditary institution associated with people of African descent (Medford, ed. 2009; Nordstrom 1980).

Under the British system, some of the first "slave codes" were passed to restrict travel, commercial transactions, entertainment, and public gatherings. In 1680, enslaved laborers in New York were required to carry passes when traveling (Dodson et al. 2000:29; see also Singleton 1984). In 1681, the mayor and city alderman issued a proclamation that prohibited city residents from performing commercial transactions with or providing liquor or entertainments to enslaved Africans or enslaved Native Americans (Medford, Brown, and Carrington 2009:26). In 1682, gatherings of enslaved laborers were limited to four people, and a pass was required for enslaved laborers to participate in sports or other activities (Medford, Brown, and Carrington 2009:26). In 1692, the city council complained of enslaved Africans consorting with free Africans who lived north of the city: "the frequent randivozing of Negro Slaves att the houses of the free negroes without the gates hath bin occasion of great disorder" (Goodfriend 1992:120). As a result, "new laws mandated that slaves who made loud noises, played in the street on Sundays, or patronized bars receive twenty lashes, or their owners pay a fine of six shillings" (Harris 2003:33). In 1696, Africans and Native Americans "were restricted from the military" (Wilson 1994:41). By 1700, the city government further reduced to three the number of enslaved Africans permitted to congregate, and enslavers were again instructed "to control their slaves on Sundays" (Harris 2003:33).

[1] On a number of occasions, enslaved and free Africans successfully petitioned the West India Company for wages due or sued Dutch colonists for civil damages. In the late 1630s, five free Africans petitioned the West India Company for back pay (Harris 2003:20; Wilson 1994:38), and the enslaved laborers Pedro Negretto and Manuel de Reus "successfully sued Europeans for wages due" (Harris 2003:20). In 1643, Big Manuel and Manuel de Gerrit de Reus successfully sued Englishman John Seales on behalf of Little Manuel for allegedly damaging Little Manuel's cow (Harris 2003:20–21; Wilson 1994:38).

[2] In 1644, the West India Company "granted half freedoms to the first eleven males who had been brought to New Amsterdam in 1626 when they, along with their wives, petitioned for freedom" (Frohne 2002:155). Enslaved Africans and their families were given agricultural land and required to "pay an annual tribute in furs, produce, or wampum" to the West India Company (Harris 2003:23). Failure to pay tribute would result in reenslavement (Medford, ed. 2009). Some have argued that half-freedom, rather than full enslavement, was beneficial to the West India Company. It supplied the company with corvée labor as needed and was not as expensive to the company as maintaining a full complement of enslaved laborers. The company also retained rights to the labor and produce from former bondmen (McManus 1966:167; Wilson 1994:24–25). In 1662, Governor Stuyvesant and the council emancipated three enslaved women who petitioned for freedom on the condition that one of them perform Stuyvesant's "housework on a weekly basis" (Medford, Brown, Heywood, et al. 2009b:23 n. 18). The following year, in 1664, the "Dutch granted unconditional emancipation to half-free blacks in the colony, who numbered about seventy-five" (Harris 2003:26; see also Medford, ed. 2009).

Comprehensive "slave codes" were developed in 1702, when a chapter of the New York Colonial laws was devoted to controlling enslaved laborers. The 1702 regulations reinforced and amended regulations of the previous two decades; continued to restrict the commercial activities, interactions, and mobility of enslaved laborers; and expanded the rights of enslavers to control and punish the enslaved. The 1702 regulations stipulated that (1) enslaved laborers could not engage in buying or selling without permission; (2) enslaved laborers could with some limitation be punished at their enslaver's discretion; (3) gatherings of enslaved laborers were limited to three people; (4) whites were prohibited from employing, entertaining, or harboring other people's enslaved laborers without permission; and (5) enslaved laborers could testify against other enslaved laborers but not against whites in court (Dodson et al. 2000:30; Frohne 2002:160; Medford, ed. 2009).

In addition, a new public office was established to handle punishments anticipated by law—the "Common Whipper of Slaves" (Dodson et al. 2000:30). Four years later, the New York assembly passed a law with far-reaching implications for the status of enslaved Africans and their children. The law stated that only "Negroes" could be enslaved, that religious affiliation or Christianization did not alter the condition of slavery, and that enslavement was hereditary (Harris 2003:28). Enslaved women were prohibited from making claims of freedom for children with Euroamerican fathers, as the law also protected "white males from the normal application of paternity claims" (Dodson et al. 2000:30).

Laws passed after the 1712 Uprising attempted to limit interactions between enslaved and free Africans, to reduce the status of free African New Yorkers by rescinding their right to own real estate, and to make manumission difficult and costly. In response to the rebellion, the Common Council declared that "no slave over the age of fourteen was to be on New York City streets after sunset without a lantern by which he or she could be clearly seen" (Harris 2003:39). Offenders "could be arrested by any white and lashed thirty-nine times" (Harris 2003:39). Again, in 1713, a "Law for Regulating Negro and Indian Slaves in the Night Time" prohibited enslaved laborers from being on the streets an hour after sunset without a light provided by their enslaver (Frohne 2002:163; Medford, ed. 2009). To ensure the participation of enslavers in controlling enslaved laborers and to fund regulation, enslavers of disobedient enslaved laborers were required to pay a host of fines, and those seeking to free enslaved laborers were required to pay steep fees (Harris 2003:39).

Manumission of enslaved laborers continued to take place under British rule but less often and according to more restrictions.[3] By the early part of the eighteenth century, manumission by will became increasingly difficult to carry out, and manumission often entailed restrictive stipulations. In 1708, Nero, an enslaved laborer held by Huguenot merchant Benjamin Faneuil, was emancipated on the condition that he continue to serve "Faneuil and his heirs for ten years" (Goodfriend 1992:116). After 1712, enslavers wishing to free enslaved laborers were responsible for a large 200-pound security and 20 pounds per annum—an amount four to six times higher than the price of an adult enslaved laborer (Harris 2003:39)—ostensibly intended to ensure the upkeep of those that were freed. Of course, this regulation had the effect of making manumission costly and slow. Enslaved laborers who were freed through last will and testament instruments often had to undergo lengthy periods of enslavement during which requirements of manumission were carried out. Sometimes, enslaved laborers whose penurious enslavers granted freedom but not the required security payment were prevented entirely from being manumitted (Harris 2003; Hodges 1999; Medford, ed. 2009; Middleton 2006). Sam, an enslaved laborer who would not be freed by his former enslaver's executor, had to petition for his freedom. Sam eventually obtained freedom from enslavement by becoming a debtor of "the joiner John Ellison and victualler Thomas Slow" (Middleton 2006:145). Because of these kinds of onerous restrictions, Governor Robert Hunter in 1717 feared that the new manumission restrictions would inspire dangerous levels of frustration and resentment among enslaved laborers whose hopes for freedom were dashed. To Hunter, the new restrictions would transform enslaved laborers into "not only careless servants, but excite 'em to insurrec-

[3] In 1691, for instance, Cresee, an enslaved laborer held captive by the Jewish merchant Asser Levy, was claimed by a creditor, Frederick Philipse, upon the death of Levy's widow, Maria (Middleton 2006). Frederick Philipse was the "second Lord of Phillipsburg Manor [who held] forty-six slaves" (Hodges and Brown 1994:xx). With the help of "Jansen Rose, Levy's erstwhile partner in the slaughterhouse, and three other city butchers," Cresee successfully petitioned for his freedom (Middleton 2006:142). Under somewhat unusual circumstances, Cresee was freed based on the sworn testimony of reputable witnesses who testified that the Levys had repeatedly declared Cresee would be freed upon their deaths. Most enslaved laborers did not have so much support.

tions more bloody than any they have yet attempted" (quoted in Middleton 2006:144).

Yet oppressive laws continued to mount. In 1730, a new series of repressive slave codes reinforced regulations of the last half-century as well as restricted the ability of enslaved laborers to testify in court. Enslaved laborers were only permitted to testify against other enslaved laborers and only "in cases of conspiracy, arson, and murder" (Lepore 2005:98). Enslaved Africans freed after 1712 were no longer allowed to own real estate, and free blacks were required to forfeit real estate to the British crown (Harris 2003:39; Wilson 1994:64). Free blacks caught entertaining enslaved laborers were fined at twice the rate of whites (Harris 2003:39).

In addition to legal and social circumscriptions, domination sometimes took the form of physical mutilation or murder (see for instance, Epperson 1990). In New York in 1677, an enslaved African in Manhattan who refused to work was killed by his enslaver, John Cooley (Goodfriend 1992:123). The murder of an enslaved person was a capital crime in British New York, and enslavers who mutilated enslaved Africans were fined 40 pounds (Foote 2004:199). Nonetheless, violators were not always prosecuted or appropriately charged. William Petit, who in 1733 beat the enslaved African Joe to death, was convicted of manslaughter rather than murder. By contrast, John Van Zandt, who fatally horsewhipped his enslaved laborer, was not prosecuted. In Van Zandt's case, the coroner somehow diagnosed the enslaved laborer's death as natural (Foote 2004:199).

Despite the harsh legal and disciplinary environment, enslaved laborers continuously struggled to obtain greater freedom and advantage. Enslaved laborers did not resign themselves to their increasingly subordinate political economic status. A potential loophole in the laws regulating the activities of enslaved Africans involved funerals, such as those that would have taken place at the African Burial Ground. Funerals of enslaved Africans were often performed at night outside the city in festive gatherings accompanied by chant, song, and dance. Funerals were excellent opportunities for enslaved Africans to show solidarity and to foment opposition against their enslavers. Fears over gatherings of diasporic Africans and the need to regulate the unsupervised activities of enslaved laborers led lawmakers to also restrict funerary practices. In 1722, the council passed a law requiring that all funerals of African New Yorkers and enslaved Native Americas who died south of the Collect Pond be conducted during daylight hours (Frohne 2002:163; Medford, Brown, Carrington, et al. 2009d:89). An amendment to the law in 1731 further limited the number of individuals in attendance at funerals and prohibited the use of palls and pallbearers for fear that covering materials might be used to conceal objects used for insurrection:

> For the preventing of great numbers of slaves assembling and meeting together at their Funerals, under pretext whereof they have great opportunities of plotting an confederating together to do mischief, as well as neglecting their Masters Services it was ordered that, if more than twelve slaves assembled at a slave funeral, those present were to be whipped at the discretion of the Mayor, Recorder or one of the Alderman except the 12 slaves admitted by the owner of the dead slave, the gravedigger and the corpse bearers [New York City Common Council 1905: 4:86–88, quoted in Medford, Brown, Carrington, et al. 2009d:89].

Despite these restrictions, the municipal government "never revoked the black town dwellers' customary privilege of burying their dead according to their own beliefs and practices" (Foote 2004:141). As a result, the "city's black population performed their own communal burial rituals and, in doing, so forged a distinct moral community set apart from the city's Christian settler community" (Foote 2004:141).

Christianity and Slavery

Religious belief and practice was intricately interwoven into patterns of domination and resistance as slavery and Christianity were related in complicated ways. The religious beliefs of New Amsterdam's enslaved laborers became one way "to distinguish Africans from Europeans . . . as non-Christian beliefs theoretically marked those whom Europeans could enslave" (Harris 2003:17). According to Harris (2003:17), Europeans initially "justified slavery as a way to bring 'heathen' Africans to Christianity." In fact, biblical texts often were cited as justification for slavery of sub-Saharan Africans. This partitioning of humankind was traced "to the postdiluvian migration of the tribes of Shem, Ham, and Japeth to different parts of the world" (Foote 2004:45). Dark-skinned people—the sons of Ham—bore the curse of Noah. "Blackness" was equated with moral pollution and "whiteness," with moral purity. Binary categories of pure and impure humankind were based in "the medieval Christian symbolism of darkness

and light," which were then translated into skin color (Foote 2004:97). The fact that Africans were "heathens" who did not practice Christianity further reinforced this duality. Perceived as "godless savages who dwelled in spiritual darkness," Africans were simultaneously the target of missionaries seeking to bring them to salvation and yet enslaved through rationalizing biblical arguments (Foote 2004:98; Harris 2003). Enslaved individuals who were baptized were seldom freed, however, as the Europeans' dependence on enslaved laborers ultimately trumped religious beliefs.

For the most part, enslavers in New York City did not take an especially active role in Christianizing enslaved Africans and were conflicted about involving Africans in Christianity. The Dutch Reformed Church's first minister in New Amsterdam, Domine Jonas Michaëlius, in 1628 referred to enslaved Angolan women as "thievish, lazy, and useless trash" (Medford, Brown, Heywood et al., 2009b:16). A decade later, however, the Dutch established the Collegiate School to train both Dutch and Africans in Christian principles. Around the same time, the Dutch Reformed Church performed their first baptism of a black child, Barent Jan Pieters (Dodson et al. 2000:20). Fourteen marriages recorded by the Dutch Reformed Church between 1639 and 1652 involved Africans, and at least one was interracial (Wilson 1994:38).[4]

The Dutch Reformed Church stopped converting enslaved Africans to Christianity altogether by 1655, however, and for the next decade only one black person was baptized (Harris 2003:17). The rationale limiting Christianization of enslaved Africans was that enslaved Africans wanted only to use their conversion to earn freedom from enslavement rather than to achieve piety and adopt Christian virtues. This attitude reduced the ability of Africans to obtain freedom and rationalized the culturally based differentiation between Europeans and Africans (Harris 2003:17–18). Similar attitudes persisted with British rule after 1664. In 1687, Governor Dongan remarked that New Yorkers made no effort to Christianize enslaved Africans (Goodfriend 1992:126). Around the same time, in 1686, only six African New Yorkers were listed as members of the Dutch Reformed Church (Goodfriend 1992:116).

In addition to blocking access to Christianity to diasporic Africans, the British barred them from their burial grounds. Shortly after construction, Trinity Church ordered in 1697 that "no Negroes be buried within the bounds & limits of the church yard of Trinity Church" (quoted in Medford and Brown 2009b:1). After 1697, most Africans in Manhattan were buried in the African Burial Ground, a burial ground that may have been used by some Africans for decades (Medford, ed. 2009). According to Berlin (1998:62), "because white northerners excluded black corpses from their burial grounds, the graveyard became the first truly African-American institution in the northern colonies, and perhaps in mainland North America."

One major effort to Christianize enslaved Africans, Elias Neau's catechism school (est. 1704), was not particularly successful in its mission, owing to the reluctance of Euroamericans to sanction baptism and their suspicion that Neau's teachings contributed to rebelliousness (Dodson et al. 2000:20; Harris 2003:34; Medford, Brown, Carrington, et al. 2009e:73). In 1707, Elias Neau estimated that he had more than 100 catechumens (people receiving religious instruction with the intent to be baptized), but fewer than 10 of them were baptized. Similar numbers were reported in other years. Many of the enslaved Africans who cycled through his ministry were interested in obtaining the booklets he handed out and perhaps in gaining a greater understanding of Christianity, but few were regulars. European contemporaries, moreover, were not especially supportive of his school. Enslaved laborers were required to obtain permission and sponsorship to be baptized, and most enslavers refused this privilege to Africans (Goodfriend 1992). Rebels involved in the 1712 insurrection were fictitiously associated with his school, and Neau's teachings were considered a potential threat to civil order (Foote 2004). Restrictions requiring enslaved Africans traveling at night to carry a lantern and a pass may have been partly directed at reducing attendance at Elias Neau's night school (Goodfriend 1992:129).

Despite being kept from Trinity's burial ground, enslaved Africans were admitted to services held at Trinity Church and other churches. Between 1704 and 1764, "869 slaves were baptized at Trinity Church" but only 19, or 2.2 percent, were considered full members (Harris 2003:35). In 1726, large numbers of English and African servants were observed to regularly attend Sunday catechisms at Trinity Church (Dodson et al. 2000:31). The English may have allowed greater access to baptism and church services during this time because after 1706, religious affiliation could no longer alter the condition of slavery. Christianization no longer justified manumission (Harris 2003:28).

[4] Lucie d' Angola and Anthony Van Angola, one of the first enslaved couples to marry in New Amsterdam, were married in the Church on the Fort in 1641 (Wilson 1994:38).

It must be kept in mind that Christianization was not necessarily a spiritual goal of enslaved Africans in New York. To enslaved Africans, Christianity may have been considered more useful as tool to access aspects of white society rather than a refuge for religious devotion (e.g., Fountain 1999). Many enslaved and free Africans in New York performed African-derived religious practices in public and private social spaces and probably maintained African spiritual beliefs in constructing their own unique identities (see Chapter 8) (Medford 2009:xx; Medford, Brown, Carrington, et al. 2009d:88, 2009e:70, 73–74). African diasporic religious beliefs and practices, moreover, may have motivated and guided resistance (Rucker 2001). African religious specialists, such as Peter the Doctor, operated openly in New York, and Africans routinely performed diasporic songs, dance, chants, and rituals at funerals and other gatherings (Medford and Brown 2009c:94). Archaeological findings at many African American sites, including those that formed in colonial Manhattan, suggest that fundamentally African religious beliefs and practices were retained and applied to American contexts (Fennell 2000, 2003; Ferguson 1999; LaRoche 1994; Leone and Fry 1999; Samford 1996; Singleton 1995; Stine et al. 1996; Wall 2000; Wilkie 1997). New religions with African roots—such as Vodun, Santería, and Candomblé—emerged amongst enslaved Africans in the diaspora, and many persist today. Even African American expressions of Christianity owe part of their character to African belief systems and the unique religious experiences of enslaved Africans. Perry, Howson, and Bianco (2009:374) suggest that "the African Burial Ground provided an institutional basis as well as founding personnel" for African American churches founded in Manhattan in the late-eighteenth and early-nineteenth centuries, such as the African Methodist Episcopal Zion Church (est. 1796) and St. Philip's African Church (est. 1818). These possible continuities in religious practice and practitioners led the researchers to hypothesize that the "African Methodist and Episcopal churches might have had a century-and-a-half's worth of African and then African American religious philosophy and ritual practice upon which to build" (Perry, Howson, and Bianco 2009:374).

It was not until late in the eighteenth century that conditions that fostered the development of autonomous Christian organizations among Africans and African Americans began to emerge (Medford and Brown 2009a:101). The New York African Society, a benevolent and spiritual organization, was formed in 1784 (Dodson et al. 2000:49). The following year, members of the Church of England and the Society of Friends (Quakers) formed the New York Manumission Society (Hodges 1999:166). Founded "by middle-class and elite white men" (Harris 2003:5), leading members included John Jay and Alexander Hamilton. The society offered free legal aid, fought against bounty hunting of fugitives and, in 1787, established the African Free School, a single-room school for 40 boys and girls at 245 William Street (Dodson et al. 2000:49–50). Ten years after its founding, the African Free School hired John Teasman, a free African American, as an assistant teacher. Teasman went on to become vice president of the New York African Society for Mutual Relief when it was founded in 1808, serving alongside William Hamilton—a free African American carpenter who may have been fathered by Alexander Hamilton—who served as president (Dodson et al. 2000:54; Harris 2003:65–66).

Other benevolent societies that promoted the education and improved welfare of Africans and African Americans in New York included the Brooklyn African Woolman Benevolent Society and Zion Church's African Marine Fund, both established in 1810. To foster early childhood religious education, Catherine Ferguson, an African American cake maker, established an integrated Sunday school in 1793 for children of African or European descent (Dodson et al. 2000:51).

Three years later, a group of African American members of the John Street Methodist Church who were unwilling to tolerate prejudicial treatment and religious marginalization organized Zion Church (Dodson et al. 2000:52). African American churches continued to be founded by African Americans unwilling to tolerate poor treatment in Euroamerican churches—the First Baptist Church (est. 1808) and the African Wesleyan Methodist Episcopal Church in Brooklyn (est. 1818) (Dodson et al. 2000:55). In the years leading up to emancipation, opportunities for education and religious involvement continued to foster racial segregation. In 1816, the Village of Brooklyn's first public school (est. 1815) "begins accepting blacks . . . but place[d] them in a separate room" (Dodson et al. 2000:56). Eleven years later, the first African Free School in Brooklyn, Colored School No. 1 (now P.S. 67), was established (Dodson et al. 2000:60).

These later African American religious and educational institutions were built on the foundation of many years of personal and organized resistance in New York's African community. While initially a justification for slavery, Christian practice became a powerful expression of human dignity and community, as well as

a tool to resist domination and create opportunities for African Americans in New York. This creative form of resistance coopted and adapted an oppressor's religion into an organizing platform for education and obtaining freedom (Medford and Brown 2009d).

Resistance

This section explores a variety of ways that enslaved Africans resisted domination in colonial New York. Resistance as a basic form of interaction and a means of defiance and self-assertion was an important component of the daily lives of enslaved and free African Americans. Enslaved laborers interred at the African Burial Ground clearly negotiated and resisted the conditions of their enslavement. Medford (2009:xix) stresses the active role African New Yorkers played in asserting their own dignity: "In colonial New York, African peoples faced their new reality and resolved not simply to survive but to structure a life for themselves in the midst of exploitation and repression." Free African New Yorkers sought the rights and wherewithal to lead prosperous and fulfilling lifestyles; they did so in resistance to mounting legal and political attempts to undermine their rights and reduce their status. Enslaved laborers, likewise, mounted official legal resistance against their enslavers as well as routinely resisted the conditions and impositions of their enslavement (Medford and Brown 2009a, 2009c). At the African Burial Ground, "human qualities and rights were struggled for simply by virtue of careful, customary burial practices that no human society has been willing to do without. This act of asserting their humanity simultaneously represented resistance to the legitimation of slavery" (Blakey 2009a:5)

Resistance can take many forms, including "covert resistance, overt resistance, and collective rebellion" (Garman 1998:142; Scott 1985). Covert resistance, such as theft and sabotage, probably pervaded the daily life of enslaved African New Yorkers. Forms of overt resistance include acts such as escape, verbal or physical assault, official grievances or petitions, and public gatherings. In comparison to other forms of resistance, collective rebellion was a less common but higher-intensity form of resistance (Garman 1998; Singleton and Bograd 1995).

Ferguson (1991:28) has identified another, more subtle form of resistance that he calls "unconscious resistance." Unconscious resistance has to do with how people perform common activities, such as food preparation, and would have been a central part of the daily lives of enslaved laborers. Ferguson (1991:28) has phrased it best: "by striving to build and live their own subculture (see Stuckey 1987), different in kind as well as material quality from that of their white captors, African Americans unconsciously distanced themselves from the kinds of rationalizations that would have helped make slavery work. *They resisted slavery by being themselves* (emphasis added)." In colonial New York, this would have meant maintaining and building on their native cultural traditions, in place of assimilating into Euroamerican culture. To the researchers,

> It is no surprise that white New Yorkers sought to control the African population, even in death. In their mortuary practices, New York Africans exhibited unity and humanity; both challenged the legitimacy of slavery and threatened to undermine its very existence. The African Burial Ground was a powerful symbol of the strength of the African community and the commitment that its members had to each other. In a sense, it was an example of passive resistance, practiced by a people who were left with few alternative ways of challenging the legal status that had been imposed upon them [Medford, Brown, Carrington et al. 2009d:89–90].

Social Gatherings

As in colonial Carolina, enslaved Africans in New York likely "created a domestic environment based on their history and experience" (Ferguson 1991:30). The history and experience of enslaved Africans were different from those of their European and Euroamerican enslavers, but unlike those held at southern plantations, enslaved laborers in New York were a minority of the population. As the servants of households, merchants, professionals, and craftsmen, enslaved Africans in New York tended to live individually or in small groups with their enslavers. With the exception of labor gangs in rural fields outside New York City, large, aggregated, and physically separated domestic units were more common to southern plantations, where enslaved laborers were the segregated majority of local residents. The life that African Americans created together in New York was formulated in contexts where people could get together and interact—in the streets, in the prayer houses, in the taverns and tippling houses, in the markets, on the docks, and in common areas within and outside the city. It was a collective life formulated in the context of work, entertainment, release, devotion, and grieving (Medford, ed. 2009).

Colonial laws repeatedly tried to suppress, undermine, or deny the collective life of enslaved laborers. Public gatherings of enslaved laborers were perceived

as a threat to public safety. A 1682 order reveals the tension between enslaved laborers and their enslavers. Enslaved laborers endeavored to congregate, celebrate, gamble, or compete in sports even as Europeans sought to deny such rights:

> many Greate Evills and Inconveniencys [committed by] Negros and Indian Slaves their frequent meetings and Gathering themselves together in Greate numbers on the Lords Day and att Other unseasonable times using And Exerciseing Severall Rude and Unlawful sports and pasetimes to the Dishonour of God Profanacon of his holy Day Breach and Disturbance of the Peace and Quiett of His Magesties Subjects many whereof are Likewise Drawed aside and Mislead to be spectators of such their Evill Practices and thereby Diverted from the more Suitable and Pious Duty And Service of the Day [New York City Common Council 1905:1:92, quoted in Medford, Brown, and Carrington 2009:26].

Enslaved laborers were also restricted from commercial activities, as these too were construed as a threat to public safety (see Chapter 5):

Nonetheless, enslaved Africans in colonial New York did manage to congregate in large numbers during festivals and other occasions. Enslaved Africans had "opportunities for mass gathering during European holidays, on Sundays, at black funerals, and at night" (Foote 1991:236). Large numbers of African and European New Yorkers participated in rural frolics where different diasporic nations shared dances, music, and other revelries (White and White 2005). In colonial New York, enslaved Africans gathered without threat of punishment during "celebration of the Dutch Pinkster, the Irish St. Patrick's Day, the English New Year's Day, observances of the English monarch's coronation and the monarch's birthday" (Foote 1991:232). Many of these festivals took on a decidedly African character, with vibrant singing, dancing, and drumming that recalled and embellished the diverse traditions enslaved Africans brought from their homelands.[5] Enslaved laborers also gathered during Sunday church services, when Euroamerican attendees were unable to supervise enslaved laborers' behavior.

Along with indentured servants and other workers, enslaved laborers had opportunities to interact in taverns and tippling houses, at the tea water pump, at the docks, and at markets. In 1696, Mayor William Merritt observed "Negro slaves making a great Noise and disturbance in the Street [and] uttering Several Oaths and Execrations" (quoted in Goodfriend 1992:121) and, in 1700, the Grand Jury complained of "the frequent meetings of negroes in tumultuous crowds" (Goodfriend 1992:121). In 1703, Elias Neau observed that enslaved Africans "dance and divert themselves" in the streets during Sunday church services (quoted in Goodfriend 1992:121). In the 1770s, people of African descent often interacted at Catherine Market in the Dock Ward, where "dance, drumming, fiddling, and singing" were common (Foote 1991:236). Street entertainment was a common activity performed for pocket change (Figure 76). Horse races making use of African and African American jockeys were run near Catherine Market. It was in these "furtive social spaces" that "black solidarity continued to grow" (Foote 1991:243). Funerals offered other occasions to gather, to express cultural identities, and to share knowledge and experience normally suppressed in the presence of people of European descent. Often accompanied by drumming and singing, funerals offered "opportunities to expression of afrocentric values, uncensored emotions, and collective spirit" (Foote 1991:235).

Rebellion

Throughout the colonial Americas, open rebellion was a recurrent feature of interactions between the enslaved and their enslavers.[6] Rebellion also occurred in colonial

[5] Stuckey (1987:80–83) has argued that the black Pinkster parades masked African-derived cultural practices and therefore should be considered a form of covert resistance to New York's dominant culture. By contrast, White (1989) has asserted that Pinkster parades were a form of syncretization and has downplayed the role of resistance in their performance.

[6] As early as 1526, the first enslaved Africans forcibly migrated to South Carolina rebelled and escaped within a few months of their arrival. Enslaved Africans revolted in Mexico in 1542, 1570, 1608, and 1650 (Dodson et al. 2000:18). In Jamaica, enslaved Africans revolted in 1669, 1672, 1673, 1678, 1682, 1685, 1690, 1733, and 1734. In 1739, approximately 44 blacks and 21 whites were killed during a bloody revolt in Stono, South Carolina (Dodson et al. 2000:28, 33). In 1743, "A 'great number of Spanish and other Prize Negroes' rioted in Newport after having been brought there to be condemned and sold" (Foy 2006:65). Enslaved Coromantees planned revolts in St. Croix in 1759 and in Jamaica in 1760 (Frohne 2002:162). In the 1790s, enslaved Africans revolted in Haiti and in Saint Domingue (Dodson et al. 2000; Harris 2003). Gabriel's 1800 plan to use over a thousand enslaved laborers to attack whites in Richmond was stopped by armed forces (Dodson et al. 2000:53). A decade later, Charles Deslondes, an enslaved laborer from Saint Domingue, led a rebellion of enslaved laborers in Louisiana (Harris 2003:68). Insurrections also occurred on vessels transporting enslaved Africans during the Middle Passage. On Middle Passage voyages, Senegambians, who made up a substantial percentage of enslaved laborers in New York, were particularly rebellious (Richardson 2001). The rebelliousness of enslaved Africans, reported in newspapers like the *New-York Weekly Post-Boy*, was an increasing source of tension and uneasiness for European New Yorkers (Hodges 1999).

New York. On April 1, 1712, more than two dozen Africans set fire to a building owned by the enslaver Peter Vantilborough, a baker. Armed with guns, hatchets, knives, and other stolen weapons, the rebels ambushed the settlers who came to extinguish the blaze. The rebels killed 8 European New Yorkers and injured 12. Although none of the rebels were killed during the attack, the rebels who had escaped to the countryside committed suicide rather than be captured. Seventy suspected rebels were jailed, and 21 were tried and convicted. Eighteen convicted rebels were executed horrifically (Frohne 2002; Foote 2004; Harris 2003; Medford and Brown 2009c:94; Scott 1961). "The executioners burned some condemned rebels at the stake, hanged others, beheaded all, and left their mutilated bodies outdoors to rot from exposure" (Foote 2004:123). Remarkably, Peter the Doctor, a free African conjurer who may have led the rebellion and had performed protective rituals of invincibility beforehand (e.g., Rucker 2001), was kept in jail for months but eventually exonerated (Medford and Brown 2009c:94; Scott 1961).

Along with several "Spanish Negroes," Akan-speaking Coromantee and Pawpaw laborers who arrived in New York sometime between 1710 and 1712 were implicated in the 1712 revolt. Two "Spanish Negroes," Hosey (Jose) and John (Juan), were from a Spanish vessel captured in 1706 and had protested since their capture that they were free Spanish citizens (Harris 2003:38; Scott 1961). Enslaved Akan, whose expectations of slavery were molded in the Akan kingdom of the Gold Coast, felt that "even if they served their masters well, slaves [in New York] were not entitled to land and the products of their own labor, and they received nothing like a tribal adoption into their masters' families and the broader settlement community. In short, the slaves 'belonged to' individual settlers, but they did not 'belong in' the settler community" (Foote 2004:136).

Foote (2004:125) has argued that the rebels acted "not so much to overthrow colonial New York's institution of slavery and assert their belief in the value of freedom as to restore themselves to familiar forms of Akan sociality or, failing that objective, to escape their enslavers through committing suicide, which, for them, meant reunion with their ancestors."

Arson

Decades after the 1712 Uprising, in 1741, a series of mysterious fires broke out that destroyed most of the buildings inside the fort, the day following a disorderly St. Patrick's Day celebration. Nine additional fires took place in the following 3 weeks. New Yorkers feared the fires were part of a widespread conspiracy between large numbers of African Americans and Euroamericans to burn down the city, rape and murder their enslavers, and escape the area by boat (Davis 1985; Lepore 2005; Medford and Brown 2009c:94–96). Huge numbers of people were arrested over the alleged conspiracy, and many were executed: "160 blacks and 21 whites were arrested, four whites (including Mr. and Mrs. Hughson) and 17 blacks were hanged, and 13 blacks were burned at the stake. Executions for blacks took place in the Commons near the New York African Burial Ground" (Frohne 2002:165; Medford and Brown 2009c). Although most scholars now recognize the conspiracy trials as a tragic miscarriage of justice and argue that no grand conspiracy existed, many of the sentiments or alleged intentions reveal the depth of New York European fears and the intensity of New York African resistance. Analysis of testimony and events surrounding the alleged conspiracy reveal that many forms of resistance—including theft, murder, and destruction of property—were regularly discussed and sometimes carried out by enslaved laborers in New York (Davis 1971, 1985, 2002). To Davis (1971:26), the events of 1741 make clear "that [enslaved laborers] evaded curfew, assembled unlawfully, traveled without permission almost at will in the city, enjoyed unlawful entertainment, consorted illegally with other persons, stole, and occasionally set fires. In short, they clearly countervened structures of social control, eluded restraint and punishment, and slipped occasionally from their shackles." Although the wider conspiracy is viewed today as the fiction of perjured testimony and hysteria (e.g., Scott 1961), evidence from associated trials clearly indicates that African New Yorkers "talked of doing damage to the society enslaving them, expressed hopes of gaining freedom and the material benefits being denied them, and acted against the laws restraining their liberty. The talk was widespread, and some did more than talk" (Davis 1985:xii).

Arson may have been a common form of violent resistance performed against property and persons. Built mostly of wood, New York's buildings' vulnerability to combustion made arson an especially dangerous threat to the community (Medford and Brown 2009c:96). As such, arson was a capital crime. In addition to its role in the 1712 Uprising and the 1741 conspiracy, other acts of arson were also committed in the city and in the countryside. In 1728,

Figure 76. Dancing at the market (from Costello 1887) (from Volume 3 [Medford, Brown, Carrington, et al. 2009b:Figure 18]).

fires in New York prompted local residents to petition municipal authorities to purchase a fire engine (Foote 1991:266). In 1736, two female enslaved Africans were accused of burning "the stable, bolting-house, and other buildings in the east ward" (Foote 2004:206). Authorities strongly suspected that the fires were part of a larger conspiracy. In 1819, Rose Butler, an 18-year-old African American indentured servant, was hanged for burning down the home of her employer (Medford and Brown 2000).

Theft

Theft was a pervasive activity amongst enslaved laborers in New York City. Enslaved laborers often stole household goods, clothing, jewelry, money, and other items in order to provision themselves with entertainment, clothing, food, or liquor, or sometimes, their own freedom. Many European New Yorkers participated in the "black market" for stolen goods by fencing stolen goods or by providing

enslaved laborers with information or opportunities to steal from New York shops and households.[7] Enslaved laborers also stole cash and embezzled money when selling goods for their enslavers at the city's markets. Laws were passed to prevent theft or the involvement of free people in the traffic of stolen goods (Goodfriend 1992; Hodges 1999; Medford, ed. 2009). One law required free people convicted of receiving stolen goods to pay the original owner of the merchandise three times the value plus a 5-pound fine (Foote 2004:205).

Although theft in New York was considered a serious crime, enslavers of enslaved laborers guilty of theft were occasionally unwilling to see enslaved laborers punished.[8] The loss of enslaved labor was more costly than the loss of a few household items. Theft was, in a sense, tolerated to some degree (Hodges 1999; Medford, ed. 2009). Nonetheless, there was prejudicial treatment against New York Africans in New York City's court system and when administered, punishment was severe. For instance, in 1719, an enslaved woman named Betty was convicted along with another woman for "stealing a brass kettle from the home of a local merchant" (Medford and Brown 2000:1). She was sentenced to be tied to a cart, driven around the city, and whipped at designated spots for a total of 39 lashes (Medford and Brown 2000:1). European New Yorkers were allowed a jury trial, whereas people of African descent were afforded only a tribunal of three justices of the peace and five prominent landowners without a jury of peers. Black defendants brought to court for theft were convicted at twice the rate of white defendants (Foote 2004:205).

Insubordination

The researchers point out that enslaved laborers could behave in ways that passively resisted their enslavers' dominance. These included habits such as smoking and drinking, sullenness, and speaking sharply. Enslaved laborers might deliberately destroy property, resort to poisoning—particularly common because of the deep magicoreligious traditions of many African groups—smother or expose infants, drag their feet, feign ignorance, and embezzle (Medford, ed. 2009; Singleton and Bograd 1995). In the Caribbean, feigning illness was one form of resistance. It was difficult to separate the genuinely sick from those who feigned illness, making it a successful avenue of resistance (Handler and Lange 1978:100).

Insubordination, however, was not always passive and sometimes became overtly violent. A number of recorded incidents from the late-seventeenth and eighteenth centuries demonstrate that people of African descent occasionally struck, attacked, or murdered European New Yorkers whom they reviled or who threatened punishment. Although apparently isolated, these kinds of incidents clearly indicate that in addition to open rebellions, smaller-scale episodes of overt violent resistance against enslavers also occurred.[9]

Runaways

Another form of resistance was, of course, running away. Indentured servants of various nations ran away as did enslaved Africans, as newspaper notices of the day indicate (Foote 2004:189). Freedom of movement, the relative anonymity of city interac-

[7] In 1699, 12 enslaved laborers associated with 8 different enslavers were "prosecuted for stealing a brass kettle, a pettycoat, and quantities of bread" (Goodfriend 1992:122). In 1718, "Mary Holst was indicted for entertaining Negro slaves at her house and receiving stolen goods such as silver and gold rings" (Goodfriend 1992:122).

[8] For example, in 1719, an enslaved laborer of the blacksmith Harmanus Burger, named Harry, was sentenced to death for theft. The old and feeble enslaver pleaded for mercy, as his survival depended on Harry's labor (Goodfriend 1992:119).

[9] In colonial New York, African gangs reportedly roamed the countryside, where they "terrorized rural communities" (Hodges 1999:101). In the 1690s, Mayor William Merritt was assaulted in the face by Prince, an enslaved laborer, when the mayor attempted to break up a group of African New Yorkers whom he accused of disturbing the peace near his home (Foote 2004; Middleton 2006:143). For his crime, Prince was publicly whipped at "every major intersection in town" (Foote 2004:206). In 1696, Mary, an enslaved woman, was charged as an accessory to the murder of John Bogee (Medford and Brown 2000). Enslaved laborers were executed in 1702 and 1708 for murdering their enslavers (Foote 2004:138). In 1708, an enslaved woman and an enslaved Native American man were executed for planning to murder the seven members of the Hallett family (Medford and Brown 2000). In 1746, a farmer who suspected several New York Africans of stealing hens was shot in the mouth with his own gun while he attempted to arrest the suspects in the small boat they piloted (Hodges 1999:101). "In 1749, four slaves from New Spain murdered the crew of a sloop moored at the port of New York, hijacked the sailing vessel, and escaped by sea" (Foote 2004:198). In 1774, Shadrack, a free black, was "convicted of assault and battery on a white man with his bare hands" (Foote 2004:206).

tions, intense privateering activity, military conflict, and the large numbers of free and enslaved Africans who operated throughout the city and its environs provided opportunities for enslaved Africans to escape captivity. By escaping, enslaved laborers "stole" themselves from their enslavers and wrested control of their own labor. Fugitives exacted economic damage on their enslavers, stole clothing and other items, and formulated multiple identities to fool officials and passersby into thinking them free or freely passing with the permission of their enslavers. Enslaved laborers attempting to escape would often forge passes claiming permission for travel from their enslavers or even faked manumission or free birth (Foote 2004:192; Hodges and Brown 1994; Medford and Brown 2009c:91–92; Waldstreicher 1999). Waldstreicher (1999) has likened many runaways to confidence men. Runaways manipulated artifacts and symbols of identity to "capitalize upon the ambiguities in the dominant racial classification system of eighteenth-century America" (Waldstreicher 1999:245).

Pursuing runaways in New York was complicated by the fact that some enslaved laborers would disappear for a few days or even weeks only to reappear later (Foote 2004).[10] Discovering runaways depended to a great extent on the vigilance of the city's free Euroamerican townspeople, and advertisements were frequently published to enlist public help (Foote 2004:189; Hodges and Brown 1994). In 1679, the Common Council passed a law imposing a hefty fine of 25 pounds for harboring fugitives or failing to return fugitives to the proper authorities (Dodson et al. 2000:28). The following year, enslaved laborers were required to carry passes when traveling (Dodson et al. 2000:29; see also Singleton 1984). More than a century later, the federal government's Fugitive Slave Act of 1793 required citizens to assist in the capture of runaways and severely restricted the ability of accused fugitives to legally demonstrate their freedom.

Escape was not rampant but fairly common nonetheless. In New York, most runaways were American-born enslaved adult males who were familiar with local conditions and could speak at least one European language, usually English or Dutch (Foote 2004; Hodges and Brown 1994; Medford and Brown 2009c:91–92). Foote's (2004:192) study of New York runaways documented that fewer than 10 percent of runaways were born in Africa, although the number of African-born runaways appears to have increased after 1760. Only 6 percent were females (Foote 2004:197). Confined to their enslavers' houses and often constrained by the responsibility of caring for young children, it was far more difficult for enslaved women to escape. When they did, according to Foote (2004:197), they often did so in the company of a male, or they disguised themselves as males. Gatherings of enslaved men in labor gangs provided greater opportunities to plot and carry out escapes.

Sometimes, escaped Africans banded together and formed maroon communities. In the New York region, maroon communities were never as large or as lasting as those that developed in other parts of the Americas (e.g., Orser and Funari 2001; Singleton and de Souza, in press; Weik 1997). Foote (1991) has argued that open revolt and *marronage* were rare in New York because of the geography of Manhattan Island and the presence of large numbers of armed European New Yorkers who could rapidly mobilize. Nonetheless, gangs of escapees did form in rural areas outside the city. In 1679, eastern Long Island became a refuge for fugitives after the enslavement of Native Americans there was prohibited by New York governor, Edmund Ardos (Dodson et al. 2000:28). In 1690, "farmers in Harlem complain[ed] about a nearby 'band of Negroes who have run away from their masters at New York and commit depredations on the inhabitants of the said village'" (Dodson et al. 2000:29–30; Goodfriend 1992:123). Outlandish gangs were again reported to terrorize rural residents in the 1740s. During and after the Revolutionary War, when large numbers of free blacks and fugitives lived in the city, New York City itself harbored a kind of internal maroon colony that hid itself not in the rural hinterland but in the complex urban spaces and anonymous social environments of the city (White 1991). Conceivably, some escapees could have reached frontier communities deep in the hinterland. Far from New York City, in the frontier of the Northwest Territory, "renegades, vagabonds, and bandits" established isolated maroon colonies (Foote 2004:198). During a 1690 expedition between Lake Ontario and the Canisteo River Valley, the French

[10] In the French Caribbean, laws distinguished between enslaved laborers who ran away permanently and those who absented themselves from work for a short time and returned voluntarily. The punishments differed for each crime. In the English Caribbean as well, it was possible for enslaved laborers to escape a particularly hard enslaver by running away and taking refuge among laborers belonging to someone else (Thornton 1992:276).

explorer Sieur de Villiers encountered "an 'outlaw village of longhouses' inhabited by Indians, Frenchmen, Dutchmen, Englishmen, and runaway slaves" (Foote 2004:198).

Another means for enslaved laborers to escape was through privateering. Privateers made large fortunes, and enslaved laborers in New York were frequently hired out as privateers in order to obtain the enslaved laborer's prize money (Foy 2006:67). In some cases, enslavers struck deals with enslaved laborers to split prize money, and, in others, enslaved laborers used privateering as a way to escape enslavement. In 1702, for instance, "New York slave masters and colonial officials [began to express] concern . . . that slaves were fleeing the colony by boat" (Foy 2006:55). Between 1739 and in 1748, large increases in privateering activity associated with imperial conflicts opened up opportunities for enslaved Africans to obtain freedom (Foy 2006:57–58). Although privateering activity declined after 1748, opportunities for escape and freedom soon returned with the Seven Years' War (1754, 1756–1763). During the Seven Years' War, New York became "the busiest privateering port in British North America" (Foy 2006:66–67). The "privateer craze" allowed some enslaved laborers opportunities for escape as well as allowing enslaved laborers working as privateers "to negotiate better working conditions" (Foy 2006:67). After the war, owing to declining commercial and maritime activity, superannuated enslaved laborers were freed "to avoid the costs of feeding them," and few enslaved laborers "attempted to flee via the sea" (Foy 2006:70).

Hodges and Brown (1994) compiled 662 runaway notices for the years 1716–1783, corresponding to 753 fugitives in the New York and New Jersey colonies, or an average of 11 runaways notices per year. Many enslaved laborers escaped during two periods: (1) the Revolutionary War era (1775–1783), when 42 percent of notices were published, and (2) in the late 1790s and early 1800s. The American Revolution (1775–1783) was an especially important period for African American resistance in New York City. In contrast to the predominantly adult male escapees of the preceding six decades, many Revolutionary War escapees were female, and substantial numbers were children (Hodges and Brown 1994). Ironically, many enslaved Africans in New York City gained freedom at this time not because of the freedom-seeking efforts of American revolutionaries but because of British efforts to enlist soldiers of African descent in exchange for their freedom (see Chapter 3). Disruptions related to the war fostered the escape of huge numbers of enslaved people, and escape was particularly common in New York. It is estimated that for all of British North America, 80,000–100,000 enslaved laborers escaped bondage during the Revolutionary War (Foote 2004:211). As many as 12,000 fugitive enslaved laborers were reported in New York City by the 1779 British military census, and 4,000 runaways remained in the city in 1782. Unfortunately, nearly half of the black loyalists, which included the old and infirm, died during the war (Foote 2004). By the end of the war, the "influx of military personnel, white loyalists, and fugitive slaves into the occupied port town enlarged the city's already swollen population of displaced people and converted the once bustling entrepôt into an overcrowded garrison town, loyalist refugee camp, and runaway slave community" (Foote 2004:212). At the close of the war in 1783, the British assisted in the emigration of at least 3,000 loyalist blacks, including "1,336 men, 914 women, and 750 children" (Foote 2004:288 n. 40). Traveling on 81 oceangoing vessels supplied by the British, the majority of émigrés moved to Nova Scotia and New Brunswick, where they settled free black communities. Others moved to England and Sierra Leone (Dodson et al. 2000:39; Foote 2004:217). Many of the evacuees were prime-age adults who escaped from enslavement in Virginia, Maryland, Georgia, South Carolina, New York, and New Jersey (Foote 2004:217). The settlement of these communities met with considerable difficulty, however, as recently emancipated individuals struggled with the problems of inadequate tools and land, racial prejudice, and the uncertainty of an unfamiliar environment (MacLeod-Leslie 2001).

During the late-eighteenth century, enslaved laborers in New York escaped far more often than their southern contemporaries in Virginia or South Carolina (Hodges and Brown 1994; White 1991). Compared to Virginia, twice as many advertisements for enslaved Africans were posted in New York City despite the fact that Virginia's enslaved population was nine times larger (Foy 2006:73). White (1991) has attributed the Revolutionary War–era trend to the unprecedented opportunities for freedom and personal improvement offered to enslaved laborers by the British forces that occupied New York City and the later trend in the 1790s and 1800s to a grow-

ing assertiveness among African Americans in New York and New Jersey after the Revolutionary War. After the Revolutionary War, (1) many enslaved laborers had seen combat against enslaving populations, (2) enslaved laborers recently imported from the West Indies were accustomed to open resistance and collective rebellion, (3) conspicuous abolitionist sentiments among some New Yorkers fomented the struggle for freedom, and (4) "the population of free blacks in New York City itself was increasing rapidly [making] bondage all the more distasteful to those enslaved" (White 1991:144). Medford (2009:xx) explains that "This late-eighteenth-century activism had less to do with the revolutionary rhetoric of the previous era than it did a continuation of the resolve of African peoples to remind white New Yorkers that they were entitled to the same respect and dignity accorded to all people. It was this persistence that defined their experience in colonial New York for more than two centuries."

Resistance during Gradual Emancipation

After 1799, the numbers of free blacks in New York City began to rise dramatically. Free blacks and fugitives flocked to the city; consequently, the latter were even harder to find, which complicated the control of enslaved laborers. Enslavers increasingly had to negotiate better deals and living conditions with their enslaved laborers or risk being "left with either a sullen refractory slave, or, if the slave decamped, nothing at all" (White 2005:151–154). Many enslaved laborers were able to bargain for their freedom to the extent that "by the time slavery ended in New York on July 4, 1827, there were virtually no slaves left in the city" (White 2005:154). (Dodson et al. [2000] have suggested otherwise, claiming that 10,000 were freed on Emancipation Day.) The uneasy and anguished transition to freedom ushered in more overt and intensified forms of African resistance. African Americans seeking entertainment or employment were seen by Euroamericans as jostling and thronging in the streets and on the sidewalks. Euroamericans began to be subject to frequent scams and hoodwinks, public insults, and overt disrespect. Owing to recent waves of immigration from Europe, African New Yorkers were only a small part of New York City population, but their conspicuous presence was prominent to European New Yorkers far beyond the proportion of the population they represented (White 2005).

In the early-nineteenth century, African New Yorkers often dressed exceptionally well, better than many European New Yorkers, and gathered together in illustrious displays, a fact that offended the European New Yorkers' sense of station. Extravagantly dressed African New Yorkers traveled in groups that defiantly forced European New Yorkers to step aside or even to leave the sidewalk entirely (White 2005). African New Yorkers subverted and overturned the racial roles to which they had for so long been subjected. This was a frustrating and destabilizing affront to many European New Yorkers: "Partly it was African Americans' flamboyant clothing, and partly their use of the accoutrements of elite white life, such as carriages. But overall it was the clamorous way in which black people were occupying the public space that whites had unthinkingly assumed was theirs alone that disconcerted blacks' fellow citizens" (White 2005:172).

Around this time, New York African churches, schools, and theaters were founded to improve literacy and education, give African New Yorkers more control over their own worship, build community solidarity, provide outlets for creativity and entertainment, and relieve African New Yorkers from prejudicial treatment. Other institutions like the *Freedom's Journal,* the "first black newspaper in the United States," were established to give independent voice to African New Yorkers (Dodson et al. 2000:60). Deep-seated prejudice and Euroamerican-controlled political and economic interests, however, continued to suppress New York African efforts at achieving equality and freedom. Medford and Brown (2009d:103) note that during the early-nineteenth century, "As the free black population grew, black institutions—both religious and secular—flourished, indicative of the effort of African Americans to further their independence. But slavery and indenture continued to shape the lives of many black New Yorkers, and discrimination imposed second-class status on the rest."

Bioarchaeological Indicators of Domination and Resistance

Although there is abundant historical evidence for resistance and the assertion of human dignity, such

behaviors are difficult to recognize archaeologically. The New York African Burial Ground history researchers have pointed out that punishment was at the discretion of the enslaver, unless an enslaved laborer broke municipal or colonial laws (Medford, ed. 2009). Mutilation or murder as punishment was not permitted by law, but it did occur. Whether administered by enslavers, free citizens, or the court, the punishment rarely fit the crime. For instance, for stealing bags of coffee and candles, a laborer named Cumbe was sentenced to 6 months of hard labor in the city jail (Medford and Brown 2009c:93). Others were publicly whipped or even executed for similar offenses. Executions were typically brutal and torturous, and as the researchers have revealed, some executions took place in the Commons near the African Burial Ground (Medford, ed. 2009).

Some forms of punishment, such as whipping or hard labor, would be difficult to identify archaeologically if they did not directly affect skeletal elements. The researchers suggest that some individuals may give mute evidence of violent punishment. The bones of the 25–35-year-old adult in Burial 137 and the 35–45-year-old male in Burial 359 had a "darkened, highly polished appearance [that] was consistent with slight burning or singeing of bone" (Blakey 2009a:6). Blakey (2009a) notes that the cause of these bones' appearance remains unknown but burning at the stake is one possibility. Burials 330, 331, 362, and 372 contained only crania, possibly indicating decapitation. Mutilation was a common punishment "for capital offenses in Colonial New York, especially those involving armed revolt" (Medford and Brown 2009c:94). The great deal of postdepositional disturbance associated with these burials and the fragmentary nature of the bones indicate this explanation is hypothetical at best.[11]

Wilczak et al. (2009) analyzed skeletal indications of trauma in New York African Burial Ground skeletons by examining incidences of fractures. Skeletal trauma can indicate the occurrence of interpersonal violence or accidents that damaged skeletal elements. In skeletal samples, the most commonly observed fractures are in long bones, ribs, and vertebrae (Merbs 1989b). Depression fractures on flat bones of the crania, typically caused by a blow to the head, are also common for prehistoric individuals (Ortner and Putschar 1981). It is important to investigate secondary changes associated with trauma, such as osteoarthritis or body asymmetry, because they may provide important clues about quality of life and the interaction of skeletal pathologies (Eisenberg and Hutchinson 1996).

The timing of fractures provides information about their effects on life history. For the New York African Burial Ground sample, fractures were classed as premortem, perimortem, ambiguous perimortem, and postmortem fractures. Fractures were considered premortem if there was evidence of bone remodeling in the area of the fracture. Fractures were considered perimortem if they appeared to have been made on live or fresh bone but showed no evidence of bone remodeling. Postmortem fractures were fractures that appeared to have been made on dead bone. Ambiguous perimortem fractures were fractures that could have been made shortly before or after death.

In their analysis, Wilczak et al. (2009:222) observed a "total of 117 fractures in 23 [adult] males and 81 fractures in 18 [adult] females." Among males, cranial fractures were most common, followed by rib fractures. Among females, femur fractures and cranial fractures were present at similar frequencies. All cranial fractures were either perimortem or ambiguous perimortem. For both males and females, at least four of five fractures were either perimortem or ambiguous perimortem, suggesting that episodes of trauma were potentially related to causes of death. A few individuals accounted for the majority of fractures.

For individuals with fractures, multiple fractures are indicated even when ambiguous perimortem fractures are excluded. For several individuals (e.g., Burials 89, 171, 180, and 205), perimortem fractures were observed in multiple areas of the skeleton. Two of these individuals were older adults (Burials 89 and 171), and three were individuals in Late Group burials (Burials 171, 180, and 205). The individual in Burial 89, a female more than 55 years of age, was one of the oldest in the sample. Burial 171 held a male between 44 and 60 years of age who had a premortem fracture of the left clavicle and 22 perimortem fractures distributed across his entire body, excepting the cranium. A female aged between 19 and 20 years at the time of her death (Burial 205) had the "greatest number of fractures [32], and all . . . were perimortem" (Wilczak et al. 2009:223).

[11] Burial 330 consisted of a displaced cranium and mandible in a disturbed area; Burial 331 "consisted of a redeposited cranium and mandible fragment in a disturbed area of the site" (Perry, Howson, and Bianco, eds. 2009c:446); Burial 362 was clearly truncated by a postdepositional act; and Burial 372 represented only a mandible.

Fractures were present in children as well as adults. The researchers also observed fractures on the bones of three subadults aged between 10 and 14 years. The child in Burial 180 had multiple fractures, which were "distributed throughout the skeleton including the long bones of all four limbs, the pelvis, and the cranium" (Wilczak et al. 2009:223). In several cases, it seems that the incidents that led to multiple fractures probably coincided with death.

The woman in Burial 25, aged 20–24 years at her death, represented "the most dramatic case of interpersonal violence" in the sample (Wilczak et al. 2009:224). She had a lead musket ball lodged in her rib cage, blunt-force trauma to her face, and a spiral, or oblique, fracture to her lower right arm above the wrist caused by twisting and pulling. The researchers interpret the injuries as resulting from resisting a person who subsequently shot the woman (Wilczak et al. 2009:218–226).

Perhaps the clearest indicator of how the bodies and souls of enslaved laborers were treated by some Euroamericans is found in Burial 364. This man aged between 25 and 35 years of age was buried without a coffin, and his remains were placed in a puzzling fashion. Some skeletal elements were placed in correct anatomical position, but others were displaced, such as the right forearm bones, which had been placed in the lower-left-leg area. The bones also displayed probable perimortem cut marks, indicating that the hands and lower arms had been severed near the time of death. One interpretation of these remains is that the person represented a cadaver that had been stolen from the burial ground, partially dissected, and reburied (Perry, Howson, and Holl 2009d). Sadly, the researchers note that grave robbing for such purposes was all too common in late-eighteenth-century New York City (Medford and Brown 2009a:101). Alternatively, if dismemberment occurred prior to or near the time of death, this individual could have been the victim of a brutal and torturous execution.

Grave goods and mortuary treatment can be interpreted as indicating resistance. These issues are addressed in discussions of origins and identity (see Chapter 4) and spirituality and sacred space (see Chapter 8).

Discussion

Historical archaeologists have come to embrace models of domination and resistance in understanding the life experiences of enslaved Africans. This chapter documented the contours of domination and resistance in colonial and early Federal period Manhattan by examining historical and bioarchaeological information. There is abundant historical evidence for patterns of domination and resistance in colonial (1624–1775) and early Federal period (1776–1830) Manhattan. The harsh impositions of slavery began shortly after the founding of Dutch New Amsterdam in 1624. The Dutch system of slavery was not as repressive as the British system came to be, but it nonetheless involved forcible labor exploitation and dehumanizing oppression. Overt resistance to the conditions of slavery began early in the settlement's history, as enslaved Africans continuously sought to increase their rights and freedoms. Africans successfully petitioned for wages due, won court battles, developed families, acquired real estate, and fought for their rights and freedom; substantial numbers of enslaved Africans were eventually freed. To the Dutch, however, the granting of half-freedom and eventually, freedom, may have been more of an economic decision than a moral imperative. New Amsterdam Africans who were granted half-freedoms were still economically and militarily obligated to the West India Company and, at the same time, were less costly to the Dutch to maintain. Also, the development of rural African-owned farms on the settlement's periphery formed a buffer zone between the Dutch settlement and Native American groups, affording the settlement protection against attack.

The conditions of slavery and oppression worsened for Africans after the British takeover in 1664. The British system quickly became highly repressive and involved the building of more and more restrictive laws and harsh punishments over time. The British restricted New York African commercial activities, travel, public gatherings, entertainment, funerals, and manumission. They restricted the rights of African New Yorkers to own land, testify in court, or to make a better life for African New Yorkers and their families. Brutal and inhumane punishments were inflicted on African New Yorkers who violated the city's highly restrictive codes. Under the British, slavery became racialized and hereditary, creating a system of exploitation, oppression, and injustice whose onerous effects continue into the present (see Chapter 3).

Yet, with every restriction and oppression, enslaved laborers resisted their enslavers. They did so in multifarious covert and overt ways. Enslaved laborers

were insubordinate, they undermined their enslavers, they stole, they gathered together, they celebrated their distinct and shared heritages, they escaped, and they rebelled. Many acts of resistance are registered historically by complaints, laws, criminal charges, and court proceedings. These documents indicate a deep and rich history of resistance but also retain a certain historical bias. More than likely, African resistance was more subtle, pervasive, and effective than historical records indicate or than archaeologists and historians realize.

The African Burial Ground was an extremely important locus of African resistance in Manhattan. Although officials restricted the size and scheduling of funeral rites, they did not restrict their content. Euroamerican citizens were confused and offended by African diasporic rituals and behaviors, but they also did not understand them. It is quite likely that resistance was intricately woven into New York African religious behaviors and that, as an institution, the African Burial Ground nurtured African-derived values and fomented New York African resistance. Blakey (2009a:4) suggests that "the cemetery may well have taken on special significance for affirming that its participants were human beings, for preserving cultures, and for maintaining a sense of hopefulness among New York's African community." Perry, Howson, and Bianco (2009:374) further suggest that, once the burial ground had closed, the legacy of African-derived religious traditions and resistance that was developed at the African Burial Ground may have continued on with the development of New York African churches and other institutions.

Resistance is difficult to read from the archaeological record. There is some evidence for domination and resistance in the mortuary treatment of individuals interred at the African Burial Ground, including evidence for the expression of African diasporic cosmologies and belief systems. In many ways, however, these were likely core aspects of neo-African identities. Their presence and maintenance in a racialized and oppressive context probably required continuous resistance against those who attempted to repress neo-African identities, but in and of themselves were not defined in terms of resistance. These issues are visited in more detail in discussion of origins and identity (see Chapter 4) and spirituality and sacred space (see Chapter 8).

Bioarchaeological evidence for domination and resistance is also somewhat difficult to interpret because evidence for trauma and stress cannot often be tied to specific acts of domination or resistance. Domination took the form of threats and occasional acts of physical violence, but more subtle "day to-day domination depended upon the deployment of a wide spectrum of disciplines, ranging from the imposition of European-American names to food rationing and control of architectural and landscape space" (Epperson 1990:35). For example, at Newton Plantation in Barbados, historical records indicate that brutal physical punishment was performed against enslaved Africans, yet the skeletal material indicates "little evidence of pathologies or traumas indicative of overt physical abuse" (Farnsworth 2000:147), leading Handler and Lange (1978:21) to conclude that more subtle abuse through diets and malnutrition was more in evidence. Farnsworth (2000:148), however, has pointed out that this kind of explanation tends to dismiss the impacts of violence on enslaved life and overlooks other forms of archaeological evidence that could inform on physical violence. As Farnsworth (2000:155) has noted, "To speak of resistance, without discussing violence, is to ignore a significant cause of that resistance and only give one side of the story."

The New York African Burial Ground stands out in this regard in that material evidence of possible physical violence was discovered. A number of individuals—including men, women, and children—suffered multiple fractures in multiple regions of their skeletons, and a few could represent the victims of execution or torture. The brutal executions that might be indicated by some of the evidence would have likely been inflicted on Africans who resisted enslavement and oppression. One woman (Burial 25), a victim of a physical assault, had her right arm twisted to the extent that it was broken. She was punched or clubbed in the face, breaking her nose and maxilla, and she was shot in the back. The attempt of her bone to reheal suggests that she remained alive for a short period before her eventual death. Her brutal killing may have occurred as she resisted her attacker.

The specific causes of trauma are often indeterminate, however. Historical records indicate ubiquitous oppression and extreme privation, the results of which are probably registered in evidence of physical stress and disease discussed in Chapters 5 and 6, in addition to the skeletal trauma discussed in this chapter. Archaeologists continue to seek ways to infer behavioral determinants of physical trauma and stress using a combination of archaeological, skeletal biological, and historical evidence. Otherwise, it can be said with

little certainty which physical evidence suggests processes of domination or resistance and which physical evidence suggests other processes. Ultimately, the assertion and maintenance of human dignity goes far beyond strategies of resistance and was likely manifest in many ways, including in the ideology, identity, and spiritual practices of enslaved Africans. These issues are discussed in the chapter that follows.

Chapter 8

Death, Ideology, and Cosmology: Mortuary Practices at the New York African Burial Ground

African-derived religious beliefs and practices were richly expressed in the Americas in many different ways. From New York to Pernambuco, enslaved and free Africans from different parts of Africa performed and participated in rituals that had deep African roots and had specific historical or cultural resonances. Differences existed between rituals performed in Benin or Angola, as well as between those performed in different communities or among different ethnic groups. Despite their differences, there were also overarching similarities among the religious rituals of people from different parts of West and West Central Africa. Many rituals involved with divination or healing were distinct in their details and material referents but similar in their purposes and goals. In this sense, African-derived rituals were fundamentally distinct from Christian European rituals in their approach to religious belief and practice. Many African rituals were highly pragmatic and were designed to address instability within individuals or communities.

New York African belief systems and practices likely persisted in the form of conjurers, priests, and midwives who performed healing, conjuring, and divination rites (e.g., Wilkie 1997). Peter the Doctor, a free New York African, performed rituals for the participants of the 1712 Uprising that resembled "elements of the African-derived magico-religious practices known as obeah and performed among the black populations of the British West Indies and other English overseas colonies, where the continuous influx of native Africans supported the retention of Africanisms" (Foote 2004:142).

In colonial New York, the number of American-born persons of African descent reached a high in the 1760s. At the same time, African New Yorkers were exposed to a process of what Foote (2004:147) has called "re-Africanism," as large cargoes of enslaved Africans continued to arrive in the port. "African-derived religious beliefs continued to be an available and competed source of moral authority for the city's black population" (Foote 2004:147). In this sense, the belief systems among enslaved Africans in the Americas were rejuvenated and influenced by belief systems brought recently from Africa, rather than eroded by the onslaught of European Christianity.

Mortuary practices at the African Burial Ground add to an understanding of the spirituality and religious philosophy of diasporic Africans in New York. The African Burial Ground affords an opportunity to explore the interplay of several different belief systems—traditional African religions, European Christianity, Islam, and perhaps Native American beliefs—and infer processes of identity formation and maintenance, syncretism, creolization, and resistance among enslaved Africans. Perhaps most important, studying the African Burial Ground brings archaeologists closer to an understanding of the universal human condition and the struggle among African New Yorkers to order and make sense of a sometimes cruel and unjust world.

All peoples mark the passage through important life stages, whether the event is a puberty ritual or the state funeral of a beloved president. Perhaps the most universal rites of passage surround death. People mourn not only to show their grief over losing loved ones but also to ensure the safe passage of loved ones into the next world, to mark the status of both the deceased and their mourners, and to reassure the community that life does indeed go on. Because of this, mortuary practices serve as a rich reservoir of information concerning belief systems, worldview, and sacred landscape. How mortuary behaviors are registered in the archaeological record and how archaeologists choose to identify or investigate funerary deposits

is crucial to establishing knowledge of these issues. Many important aspects of mortuary ritual may not be clearly distinguished in the archaeological record, and others may require methodological advances to be identified.

What can be learned from the archaeological record alone is limited, however, particularly from the perspective of a single site. As will be discussed below, mortuary patterns at the New York African Burial Ground remain intriguing in a variety of aspects, including in their apparent homogeneity. Perry and Howson (2009:109) observed that "an extraordinary degree of homogeneity is found in four parameters of potential variability examined at the African Burial Ground. Coffin use, body orientation with head to west, and extended supine body position characterize the vast majority of interments. The preference for individual interment is also very evident. . . . It is also very likely that shrouding was the prevailing practice."

The homogeneity of archaeologically recognized mortuary practices suggest that diasporic Africans in New York routinely performed some mortuary practices in very similar ways. These practices, including the use of shrouds; extended, supine burial in individual coffins; orientation of burials with an individual's head pointing to the west; and limited interment of grave goods, are similar to the practices of Christian Europeans during the period the African Burial Ground was in use. In a few instances, Islamic or Native American practices may be in evidence. Possibly, official ordinances or the influence of grave diggers or sextons are responsible for the narrow range of variation in mortuary practices, but no evidence in support of these hypotheses has yet to surface. The uniformity of observable mortuary patterns at the African Burial Ground suggests that some strata of African Diaspora mortuary behavior overlapped significantly with that of Christian Europeans. At the same time, historical and ethnographic descriptions of religious practices in New York City and other diasporic contexts as well as archaeological evidence of African Diasporic spiritual practices at the New York African Burial Ground suggest that fundamentally African or African American belief systems were also expressed.

This chapter summarizes what has been learned about mortuary practice from the New York African Burial Ground. After considering some of the general problems and issues underlining mortuary studies, mortuary practices at the New York African Burial Ground are considered—use of coffins; body placement and orientation; use of grave markers; shrouding; and accompanying items, including clothing, ornamentation, and other items. Next, the archaeologically silent aspects of burial are considered—preparing the body for burial, mourning rites, and associated ceremonies. The chapter then turns to the ideological influences of Christianity, Islam, Native American spiritual beliefs, and African religions upon mortuary practices at the New York African Burial Ground. Last, the burial ground as sacred space and its meaning to the descendant communities is discussed.

Problems and Issues in Mortuary Studies

Deciphering underlying religion or ideology from archaeological manifestations is never easy. Many beliefs and practices have no obvious material signatures. Or, without fairly detailed historical or ethnographic information on ideology and ritual, archaeologists may not know what to look for or how specifically to interpret archaeological patterns. Consequently, such mortuary behavior is difficult to interpret using archaeology alone (Handler and Lange 1978). An exuberant burial involving numerous rites and ceremonies that emphasize the roles of ancestor spirits versus a sedate funeral emphasizing grief, piety, and a distant heaven could result in a similar material signature—the extended supine burial of an individual within a coffin oriented with the head to the west.

Information from diverse historical and ethnographic sources is often needed to interpret archaeological data. Jamieson (1995:39) strikes to the heart of the matter in writing that

> there is a need for historical archaeologists to consider the work of historians of slavery, art historians, Africanist ethnographers, and Africanist archaeologists. Only with such a wide-ranging "ethnohistorical" approach can historical archaeologists begin fully to put the burial practices of African Americans in context. The interpretation of mortuary rituals and material culture is contingent on the wide-ranging chronological, geographical, and social contexts which characterize the long history of African descendants in the New World.

Many factors complicate the realization of these laudable goals, however, only some of which can be touched upon here.

A major problem in the investigation of African religions is the tendency to overgeneralize African cultures, which has resulted from a paucity of well-researched ethnohistory and ethnography, a lack of archaeological studies in West and West Central African sites contemporary with the period of slavery, and the relative newness of Colonial period studies (Armstrong 1990:8; Jamieson 1995:41; Thornton 2001:73). Thornton (2001:73) has written that most Central African ethnography "describes religion best only for the northern part of the Kikongo-speaking area" and "necessarily also focuses on the cultural situation of the twentieth century, which complicates using it for periods centuries earlier." By contrast, the writings of sixteenth- and seventeenth-century European visitors to Africa are "fairly abundant but problematic" in their hostile misrepresentations of African religions (Thornton 2001:73).

An extraordinary variety of cultural expressions can be found among African cultures and enslaved Africans in New York derived from diverse parts of this huge continent (Butler 2000:24) (see Chapter 4). As Goodfriend (1992:113) has reminded us, "New York City's large black population was strikingly heterogeneous, consisting of native-born New Yorkers, 'seasoned' blacks from the West Indies or other mainland colonies, West Africans, Malagasay people from Madagascar, and so-called Spanish Indians." This heterogeneity makes the apparent homogeneity of burial practices at the African Burial Ground all the more remarkable.

The lack of data on social and temporal variation in belief systems is a serious obstacle to interpreting the mortuary practices of Africans in the diaspora (Howson 1990; Jamieson 1995:43; Posnansky 1999). Many studies have tended to focus on a select number of West African groups, such as Fon, Efe, and Yoruba, whose religious background formed the foundation of religions that developed in the Caribbean, such as Vodoun and Santería. The religious backgrounds of other groups, such as those in Central Africa and Senegambia, have been less well studied, although recent investigations are beginning to address gaps in ethnohistorical knowledge (Kelly 2004; Sweet 2003; Thornton 2001). Ethnographic studies have also concentrated on state societies. When nonstate societies were first studied by anthropologists, they already had been displaced, marginalized, and deeply affected by the trade in enslaved Africans (Posnansky 1999).

Archaeological sampling is an important consideration at the African Burial Ground. The excavated portions of the burial ground represent only a fraction of the original cemetery (Howson and Bianchi 2009a) (see Chapter 3). Therefore, the burial sample is probably not representative of the entire cemetery. Complicating sample size and representativeness issues are problems with field methods and the myriad formation processes that have affected the deposits and the remains (Howson and Bianchi 2009) (see Chapter 2). Processes that may have affected burials and their contents include historical and modern ground disturbance, factors affecting preservation, refuse disposal, bioturbation, and similar processes. Field methods precluded comprehensive identification of the original ground surface and paid limited attention to stratigraphy or the assessment of factors affecting preservation (Howson and Bianchi 2009a). Features overlying burial deposits were given little attention or documentation. Provenience information was also not specific enough to search comprehensively for evidence of grave markers or to assess relationships between some artifacts and burial events (Howson and Bianchi 2009a) (see Chapter 2).

As has been noted previously, the precise identities of the deceased interred in the African Burial Ground are unknown. No records were kept of the individuals who were buried in the African Burial Ground, in contrast to the cemeteries associated with contemporary Christian churches. Currently, it is not known precisely where individuals came from, how they were related to other individuals in the burial ground, or what tasks they performed in New York and elsewhere. As Seeman (1999:405) has reminded us, enslaved Africans left a faint trace on the historical record. Whereas it is plausible that the majority of the New York African Burial Ground interments represent the remains of enslaved Africans, based on documentary records, some could have been free Africans, and others could have been of European, Native American, or of mixed descent.

Some Native Americans were enslaved, as were those persons referred to as "Spanish Negroes" (Cantwell and Wall 2001:168–169; Foote 2004:36, 80: 197; Goodfriend 1978:137, 1992:112; Harris 2003:16; Kammen 1975:58; Medford, ed. 2009). Enslaved Native Americans included the local Munsees as well as nonlocal groups who were brought to New Amsterdam as captives or came there to trade. If local enslaved Native Americans were buried in the African

Burial Ground, they more likely would have been interred during its earliest use; in 1679, the English governor banned the enslavement of local Indians, although the enslavement of members of other Indian groups continued (Cantwell and Wall 2001:320 n. 2; Foote 2004:80). In 1706, the British passed a law stating that "Negroes only shall be slaves" and discounting religion in determining enslavement (Harris 2003:28).

"Spanish Negroes" were captured from Spanish vessels and enslaved because of their "swarthy" skin, despite protestations that they were neither slaves nor Negroes (Foote 2004:136; Harris 2003:18). This practice ended after 1750 (Harris 2003:30). Some Spanish Negroes were Native Americans captured in New Spain from Central and South America (Goodfriend 1992:114). Records typically do not differentiate between Native Americans and "Spanish Negroes" when referring to enslaved Native Americans (Goodfriend 1992:114).

The researchers also noted that not all Africans were enslaved. Particularly during the Dutch period, a number of free Africans lived in Manhattan and its environs, and they maintained a presence after Dutch rule ended (Goodfriend 1992:115–116; Medford, ed. 2009; Perry, Howson, and Bianco, eds. 2009a; Wilson 1994:23–25). By contrast, Foote (2004:259 n. 135) has suggested that "only a small number of free blacks and black indentured servants lived in New York City and the adjacent countryside during the colonial period" and hypothesizes that most individuals identified as "Negro" in official census were enslaved. People identified historically as "free blacks," unless they were church members, may have been buried in the African Burial Ground.

Some Europeans also may have been buried in the cemetery. The 1757 Almshouse cemetery for New Amsterdam's abject poor was located south of the African Burial Ground and may have overlapped with southern portions of the cemetery (Howson, Bianco, et al. 2009:48). Some executed lawbreakers also were buried in areas adjacent to or overlapping the African Burial Ground (Foote 2004:104). As Foote (2004:141) has written, "the colonial rulers deemed the area encompassing the Negroes Burial Ground to be a convenient location for the disposal of toxic waste and the burial of outsiders, such as paupers, criminals, and slaves." Deserters and prisoners of war also were buried near the barracks on the Commons in areas that may have overlapped with portions of the African Burial Ground. The researchers concluded that the burials of prisoners, prisoners of war, and the poor may have been most common in areas of the African Burial Ground south of excavated areas (Howson, Bianco, et al. 2009). As a result of the confounding variables discussed above, any inferences made about cultural, religious, or ethnic identity and the lifeways of ethnic groups based on the treatment of the dead should be considered tentative. With these caveats in mind, this chapter turns to a discussion of burial practices at the African Burial Ground and the inferences concerning worldview, cosmology, and belief systems that can be derived.

Burial Practices at the African Burial Ground

As has been noted, one of the most striking aspects of burial treatment at the African Burial Ground is its homogeneity. This section examines evidence for coffin use and decoration, shrouding, body placement and orientation, grave markers, clothing, and ornamentation.

Coffins

According to Perry and Howson (2009), 353 of the 385 graves for which the presence or absence of a coffin could be determined contained coffins (91.7 percent). Coffins generally were simple constructions lacking hardware and were made from soft woods such as cedar, pine, or fir (Howson and Bianchi 2009b:221; Perry and Howson 2009:110). Three main types of coffins were observed: hexagonal, or shouldered; tapered, or trapezoidal; and rectangular (Figure 77). Poorly preserved coffins were labeled as "four sided" when it could not be determined if the shape was tapered or rectangular. Some coffins contained footboards, and these were found in tapered and shouldered coffins (Howson and Bianchi 2009b:217). Gable-lidded coffins, which were found at the seventeenth-century Martin's Hundred site in Virginia (Noël Hume 1982:38–39, 70) and represented the majority of identifiable coffin shapes from Philadelphia's First African Baptist cemetery dating to the nineteenth century (Parrington et al. 1989:144), were not observed at the New York African Burial Ground.

The researchers used coffin shape as one attribute to place interments in time. Drawing on several lines of evidence, the researchers suggest that the "trapezoidal

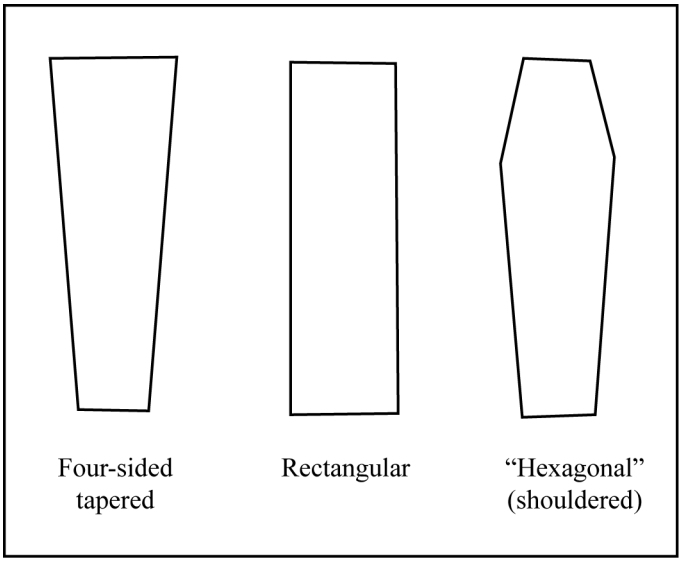


Figure 77. Coffin shapes represented at the New York African Burial Ground (from Volume 2, Part 1 [Howson, Perry, et al. 2009:Figure 49]).

(four-sided tapering), flat-lidded coffins found at the New York African Burial Ground may represent an earlier and/or less expensive style" than the hexagonal style (Howson and Bianchi 2009b:215). The researchers support this hypothesis by noting that "where graves are superimposed, burials with four-sided, tapered coffins usually predate burials with hexagonal-shaped coffins" (Howson and Bianchi 2009b:215). Tables 28–31 present coffin data by temporal group for burials of determinable age, sex, and coffin type. It is clear from these tables that hexagonal coffins were not present in the Early Group burials (pre-1735) but predominated after that time. It must be noted, however, that coffin shape was one of several factors used to define temporal groups (see Chapter 2), and thus criteria for inferring the relative age of burials could have influenced this pattern (Howson and Bianchi 2009b:218).

Subadults in the sample were always buried in coffins. Subadults' coffins were more varied than adult coffins. Tapered, four-sided, rectangular, or other coffin shapes were most common among subadults and were used in a substantial percentage of subadult burials during all periods. The researchers provide an explanation for the greater variance in coffin shape among subadult burials and perhaps the more frequent occurrence of non-hexagonal shaped coffins: "The shape of children's coffins was less standardized than the shape of adult coffins because children's coffins were more likely to be made by families rather than purchased from workshops" (Howson and Bianchi 2009b:218).

Most coffins were constructed with iron nails rather than screws—although preservation made it difficult to identify screws—and most lacked hardware. Screws were identified in the field for 3 burials and in the laboratory for 31 burials. Other hardware items that could have been screws were set aside for X-ray but unfortunately were lost as a result of the terrorist attacks of September 11, 2001 (Howson and Bianchi 2009b:232). The few screws that were recorded in situ were recorded at the corner joints or along the lid, suggesting that screws may have been used as needed to address problems in construction, such as warped wood (Howson and Bianchi 2009b:233). Most of these were used in the construction of hexagonal shaped coffins (Howson and Bianchi 2009b:Table 41), suggesting they may have exclusively been part of the toolkit of professional cabinetmakers. Screws added to the cost of coffins, but the number identified per coffin was low. Typically, one or two screws were identified for coffins with screws.

The hexagonal coffin containing Burial 252, a child between 1 and 2 years of age, may have had a breastplate. Seven handles with back plates, also of iron, were recovered, six from the same burial (Howson and Bianchi 2009b). The scarcity of coffin hardware is notable. At a later, rural African American cemetery in Arkansas, the Cedar Grove Baptist Church Cemetery (dating between 1890 and 1927), casket-lid fasteners, handles, decorative tacks, plaques, and windows were common. It is intriguing that coffin hardware, except for decorative tacks, was absent from infant (birth to 2 years) burials and rare among child

Table 28. Coffin Shape in the Early Group (pre-ca. A.D. 1735), by Age and Sex of Interred Individuals

Age and Sex	No Coffin	Tapered Coffin	Four-Sided Coffin	Rectangular Coffin	Total
Subadult, indeterminate sex	—	4 (20.0%)	4 (44.4%)	1 (100.0%)	9
Adult, indeterminate sex	—	2 (10.0%)	—	—	2
Adult male	1 (100.0%)	6 (30.0%)	1 (11.1%)	—	8
Adult female	—	6 (30.0%)	1 (11.1%)	—	7
Male indeterminate age	—	—	2 (22.2%)	—	2
Female indeterminate age	—	2 (20.0%)	1 (11.1%)	—	3
Total	1 (100.0%)	20 (100.0%)	9 (99.9%)	1 (100.0%)	31

Note: Disturbed and redeposited remains, deposits lacking skeletal remains, and burials of indeterminate age and sex excluded; indeterminate and unknown coffin types excluded. Possible males grouped with males, possible females with females; possible coffin types grouped with determinable types. Subadult = <15 years; adult = >15 years.

Table 29. Coffin Shape in the Middle Group (ca. A.D. 1735–1760),by Age and Sex of Interred Individuals

Age and Sex	No Coffin	Hexagonal Coffin	Tapered Coffin	Four-Sided Coffin	Rectangular Coffin	Total
Subadult, indeterminate sex	—	41 (45.0%)	4 (100.0%)	8 (100.0%)	4 (100.0%)	57
Adult, indeterminate sex	—	2 (2.2%)	—	—	—	2
Adult male	—	21 (23.1%)	—	—	—	21
Adult female	2 (100.0%)	23 (25.3%)	—	—	—	25
Male indeterminate age	—	2 (2.2%)	—	—	—	2
Female indeterminate age	—	2 (2.2%)	—	—	—	2
Total	2 (100.0%)	91 (100.0%)	4 (100.0%)	8 (100.0%)	4 (100.0%)	109

Note: Disturbed and redeposited remains, deposits lacking skeletal remains, and burials of indeterminate age and sex excluded; indeterminate and unknown coffin types excluded. Possible males grouped with males, possible females with females; possible coffin types grouped with determinable types. Subadult = <15 years; adult = >5 years.

Table 30. Coffin Shape in the Late-Middle Group (ca. A.D. 1760–1776), by Age and Sex of Interred Individuals

Age and Sex	No Coffin	Hexagonal Coffin	Tapered Coffin	Four-Sided Coffin	Rectangular Coffin	Total
Subadult, indeterminate sex	—	10 (31.2)	2 (100.0%)	2 (100.0%)	1 (33.3%)	15
Adult, indeterminate sex	—	—	—	—	—	—
Adult male	2 (66.7%)	12 (37.5%)	—	—	2 (33.3%)	16
Adult female	1 (33.3%)	8 (25.0%)	—	—	—	9
Male indeterminate age	—	2 (6.3%)	—	—	—	2
Total	3 (100.0%)	32 (100.0%)	2 (100.0%)	2 (100.0%)	3 100.0%)	42

Note: Disturbed and redeposited remains, deposits lacking skeletal remains, and burials of indeterminate age and sex excluded; indeterminate and unknown coffin types excluded. Possible males grouped with males, possible females with females; possible coffin types grouped with determinable types. Subadult = <15 years; adult = >15 years.

Table 31. Coffin Shape in the Late Group (ca. A.D. 1776–1795), by Age and Sex of Interred Individuals

Age and Sex	No Coffin	Hexagonal Coffin	Tapered Coffin	Four-Sided Coffin	Rectangular Coffin	Other	n
Subadult, indeterminate sex	—	13 (24.5%)	1 (50.0%)	2 (100.0%)	5 (83.3%)	2[a] (100.0%)	23
Adult, indeterminate sex	—	2 (3.8%)	—	—	—	—	2
Adult male	16 (64.0%)	20 (37.7%)	—	—	—	—	36
Adult female	6 (24.0%)	16 (30.2%)	1 (50.0%)	—	1 (16.6%)	—	24
Male indeterminate age	3 (12.0%)	1 (1.9%)	—	—	—	—	4
Female indeterminate age	—	1 (1.9%)	—	—	—	—	1
Total	25 (100.0%)	53 (100.0%)	2 (100.0%)	2 (100.0%)	6 (100.0%)	2 (100.0%)	90

Note: Disturbed and redeposited remains, deposits lacking skeletal remains, and burials of indeterminate age and sex excluded; indeterminate and unknown coffin types excluded. Possible males grouped with males, possible females with females; possible coffin types grouped with determinable types. Subadult = <15 years; adult = >15 years.

[a] 1 shared grave, 1 possible 8-sided coffin

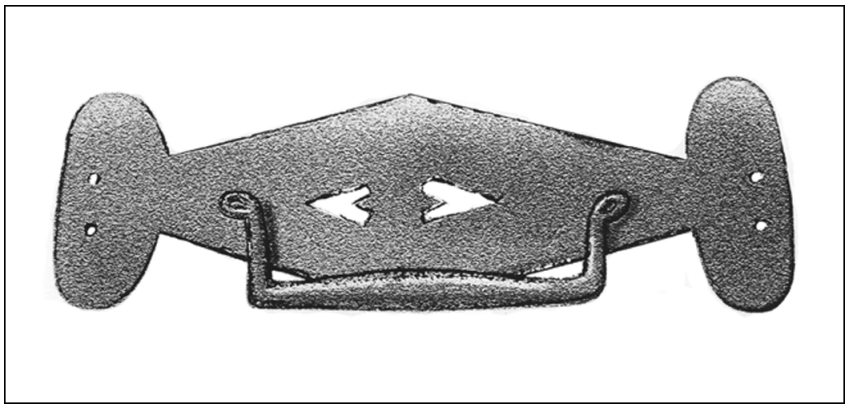


Figure 78. Composite drawing of coffin handle based on the X-rays taken of the handles from Burials 176 and 90 (length is 7.4 inches) (drawing by C. LaRoche and R. Schultz) (from Volume 2, Part 1 [Howson and Bianchi 2009b:Figure 127]).

burials (2–13 years) at Cedar Grove (Rose and Santeford 1985b:130, 133). By the mid-eighteenth century, coffin furniture, such as lid fasteners, handles, plates, and decorations, was mass produced and available to coffin makers (Habenstein and Lamers 1975:256–257). The lack of coffin furniture among the New York African Burial Ground interments may suggest a lack of availability at the time of the cemetery's use or, more likely, may reflect the impoverishment of enslaved people.

Decorated Coffins

Some coffins at the New York African Burial Ground were decorated with paint or coffin furniture. Coffin furniture includes items such as "handles, corner and edge 'lace,' breastplates, upholstery, and other decorative metalwork" (Howson and Bianchi 2009b:239) (Figure 78). The use of decoration on coffins is generally understood to have entailed additional expense and may have been relatively rare at the African Burial Ground owing to the impoverishment of the individuals buried there. The inclusion of grave goods and coffin furniture may have been preferred among some enslaved West Africans. In the late-seventeenth-century Gold Coast region, for instance, Willem Bosman (1721:221–222) noted that deceased who were rich during life "are richly cloathed when put into the Coffin; besides which several fine Cloaths, Gold *Fetiches*, high-prized Corals . . . and several other valuable things are put into the Coffin to him, for his Use in the other Life, they not doubting but he may have Occasion for them. The Value and Quantity of his Coffin Furniture, is adjusted in proportion to what the Deceased left his Heir, or perhaps to the Heirs Conveniency."

Coffins in four burials (Burials 159, 183, 213, and 313) were thought by the excavators to have had possible red-paint residue. The individuals were a woman 25–35 years old (Burial 159), a child approximately 1 year old (Burial 183), a woman aged 45–55 years (Burial 213), and a man aged 45–55 (Burial 313) (Howson and Bianchi 2009b:241, 243). The red color suggests it may have been primer rather than topcoat, in which case it is possible that the coffins could have been painted black, but only the primer was preserved (Rose and Santeford 1985a:99, 105, 118). Otherwise, it is possible that the red color held symbolic significance, was incidental to the origin of the materials used, or is a product of deterioration. Identification of the red color is based on visual inspection only, as samples were not analyzed for pigment (Howson and Bianchi 2009b:243). The researchers (citing Rauschenberg 1990:38) note that information on coffin manufacture in Charleston and New York suggests that black paint was used to paint coffins and entailed an added layer of cost.

Painted coffins have been noted among other enslaved populations. At the Cobern Street cemetery in Cape Town, South Africa, some of the coffins in which enslaved Africans were buried were painted white or green. The green color could indicate staining with copper residue (Cox et al. 2001). Some burials interred in a cemetery at Vredendal, South Africa, were interred in "coffins" made of recycled wood—wine-barrel staves, fruit boxes, and, in one case, a drawer from a chest of drawers—as indicated by characteristic paint residues and stamped lettering. February (1996) has attributed this practice to the poverty of the deceased, who were farm laborers.

The researchers suggest that painting a coffin was "an added funeral expense" and might represent paternalism, the ability of kin to pressure enslavers into additional outlay, the esteem in which the deceased was held, "or the status or aspirations of the mourners"

(Howson and Bianchi 2009b:243). Goodell (1985:247; cf. Dworkin 1972:65), defines paternalism as "interference with others' autonomy justified by reasons referring exclusively to their welfare, good, happiness, needs, interests, or values." Another possibility is that wood originally used in storage or shipping containers or furniture was reused in the manufacture of coffins.

Three burials were placed in coffins with decorative patterns made from tacks (Burials 101, 176, and 332). Tacks thought to represent a lid decoration were also discovered in Burial 222, an adult of undetermined age, but the burial was vandalized and the tacks scattered before their original locations could be recorded properly (Howson and Bianchi 2009b:239). Tacks were also discovered in association with Burials 138, 197 and 256, but these do not appear to have represented lid decoration. It is interesting that although Euroamericans preferred brass tacks for coffin decoration, the tacks for Burials 101, 176, and 332 were made of iron, and those in Burial 222 were described as cast metal. The researchers note that the white reflective nature of tinned iron tacks could signal "the possible significance of color or other visual quality" (Howson and Bianchi 2009b:239). These burials suggest an additional layer of cost was placed in the burial of the deceased and that, at least in the case of the Burial 101, may indicate something about ethnic affiliation and diasporic origins (see Chapter 4). These individuals may have been highly regarded by mourners or had access to more resources than other individuals interred at the New York African Burial Ground. All three of these burials contained a Late-Middle Group (ca. A.D. 1760–1776) male buried with a child or infant buried nearby.

Coffin Use in Africa and the Diaspora

The use of coffins appears to represent a historical-period shift in African mortuary practices, and coffin use was widely distributed in the African Diaspora. According to some sources, only kings in the ancient West African past were buried in coffins; ordinary people were wrapped in mats or cloth for burial (Ffoulkes 1909:16; Rattray 1927:169). By the eighteenth century, many Africans had begun using coffins, and today the practice is widespread (Adjei 1943:92; Chukwukere 1981:61; Medford, ed. 2009). Medford, Brown, Carrington, et al. (2009d:86) note for instance that "Gold Coast mortuary practices provided that the body be interred either wrapped in a shroud or placed in a coffin, which became increasingly common in the eighteenth century." In some areas, traditional social and kinship relations expressed in funerary practices were transferred to the use of coffins. Among the Fante of coastal Ghana, the children's primary obligation to their dead father is to provide the coffin and shroud, which is given to his matrilineal kin (Chukwukere 1981:63). Chukwukere (1981:63) has stated that "the coffin is a fundamental symbol of the father-child relationship."

The researchers observed that because enslaved persons were legally defined as property, the responsibility for coping with their death often rested with enslavers (Medford, Brown, Carrington, et al. 2009d:86). Howson and Bianchi (2009b:215) suggest that "at least in some cases, the master of a household was expected to provide the coffin for an enslaved member (and probably also for free or indentured servants or other dependents)." For example, the cabinetmaker Joshua Delaplaine recorded filling orders for 13 coffins used to bury Africans between the years 1753 and 1756 (Howson and Bianchi 2009b:215; Howson, Bianco, et al. 2009:58; Medford, Brown, Carrington, et al. 2009d:85). In other cases, particularly for infants and young children, coffins may have been supplied by relatives. It is unclear whether enslavers provided coffins to enslaved Africans throughout the eighteenth century or during the period of Dutch settlement, as current information on the provision of coffins dates mainly to the 1750s, and no official ordinances regarding the provisioning of coffins have been discovered. To the English during the late-seventeenth and early-eighteenth centuries, a coffin was "an essential element of the decent funeral, even for the poor" (Houlbrooke 2000:193). Given the intense concern over disease and recurring epidemics in urban centers like London and New York, it is at least plausible that coffin use was considered a preventative measure against the spread of disease. During a 1793 yellow fever epidemic in Philadelphia, for instance, coffins were stockpiled and trenches dug in advance at the potter's field so that poor victims of the disease could be buried quickly (Murphy 2003:66). At the same time in New York City, corpses were considered dangerous contributors to the spread of epidemics (Milne 2000). Given the impoverishment inferred for many Africans, the expense of coffins, and the prevalence of coffins at the New York African Burial Ground, however, it seems likely that the provision of coffins by enslavers may have been common. If indeed the case, the provision

of a coffin appears to have been the one aspect of the funerals of enslaved individuals in which enslavers were regularly involved. As Medford, Brown, Carrington, et al. (2009d:85) discerned, "[t]he few pieces of evidence available concerning black burials suggest that white participation in black mortuary practices ended with the furnishing of a coffin." The remainder of burial practices, including the performance of ceremonies and rituals, the placement of grave goods, and the preparation of the body, appear to have been under the control of mourners (Medford, Brown, Carrington, et al. 2009d:86).

Burials Without Coffins

Thirty-two burials were interred without coffins, and 30 of these contained individuals of determinable age and sex. All coffinless burials were adults, and most were males (75 percent). Most (29, or 90.6 percent) were assigned to the Late temporal group (A.D. 1776–1795). The absence of coffins among adult males is particularly striking. Perry and Howson (2009) list several possible explanations for the absence of coffins: poverty (the inability of the deceased's family to afford a coffin), refusal of the enslaver to provide a coffin for an enslaved person, special circumstances of death or burial, or distinctive burial customs. Noting that most burials without coffins were assigned to the Late temporal group, which corresponds to the period including the Revolutionary War and afterward, the researchers propose that these individuals were African American soldiers and refugees who lacked the financial and social means to ensure coffin burial (Howson and Bianchi 2009b:213; Perry, Howson, and Bianco 2009:370; Perry, Howson, and Holl 2009d:204).

It is intriguing that most of the deceased buried without coffins also were buried without shrouds, as indicated by the absence of shroud pins. Only six burials without coffins had shroud pins, and field notes suggest that one of these (Burial 210) actually may have been buried in a coffin. It is also interesting that a higher proportion of the individuals buried without coffins also had material culture other than clothing fasteners and shroud pins than in the sample as a whole. Clothing fasteners, ornaments, or other items were roughly twice as common among coffinless burials as opposed to burials with coffins (Howson and Bianchi 2009b:214). In other aspects, coffinless burials appear to differ minimally from individuals buried in coffins.

Shared Coffins and Graves

The researchers noted that "the overarching mortuary program as performed at the cemetery called for individual interment. Shared graves are exceptional, though they appear in all temporal groups" (Perry and Howson 2009:116). The researchers identified 27 cases of possible shared graves. The researchers considered that there may have been more cases of shared graves than have been recognized, but disturbance, preservation, and other factors make the interpretation of shared graves difficult. The presence of intervening sediment, stratigraphic relationships, and the age and gender of the deceased suggest that most of these cases represent subsequent rather than simultaneous interments. In rare cases, the burial of an adult woman with an infant suggests the burial of a mother and child who may have died at roughly the same time. In other cases, possible family relationships are indicated by sequences of burials within the same grave (see Chapter 4). Genetic studies have yet to be conducted for most individuals, but instances of shared graves suggests that the African Burial Ground played an important role in the recognition of family relationships and the maintenance of family ties. The locations of specific graves were likely remembered through time. Many other specific interpretations of shared graves are possible, including associations with ancestral spirits and kinship ties between the living and the dead.

Although rare, the custom of sharing coffins and graves occurred elsewhere in the Diaspora. Enslaved Africans in the Cobern Street cemetery in Cape Town, South Africa, sometimes shared a single grave and coffin. One burial contained a woman and child, and another held a man, woman, and child (Cox et al. 2001:81). The African origin of these individuals were inferred based on isotopic analysis and the presence of culturally modified teeth among some individuals. Grave sharing continued into the nineteenth and early-twentieth centuries among African American populations. Two infants, probably stillborn and perhaps twins, were buried in the same casket at the Cedar Grove Baptist Church Cemetery (Rose and Santeford 1985a:56).

Shrouding

The researchers inferred that most individuals buried at the African Burial Ground were buried in shrouds, winding sheets, or clothing. The presence of copper pins (Figure 79) was generally interpreted as evidence

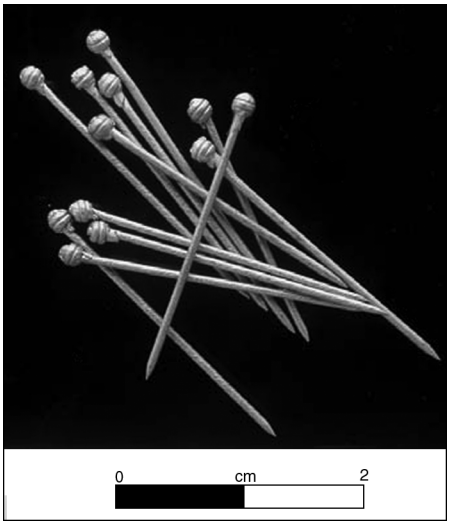


Figure 79. Replicas of New York African Burial Ground pins created by artisans at Colonial Williamsburg (photograph by Rob Tucher) (from Volume 2, Part 1 [Howson, Bianchi, and Perry 2009:Figure 9]).

for shrouding, and the placement of pins within the burial was linked to different shroud styles. According to Howson (2009:258), "straight pins would have been available at shops, at the markets, and no doubt from peddlers, and they also could have been obtained by women and girls who did the sewing in European households." Cloth would have been costly and may have been obtained from stores, peddlers, recycling, or theft (Howson 2009:259). The researchers suggest that, barring factors of preservation, individuals without pins or clothing fasteners may have been buried in winding sheets, that were "wound about the corpse or sewn or tied shut" rather than pinned (Howson 2009:247), but lack of evidence for pins or clothing fasteners makes the inference of funeral attire tenuous. Pins appear to have been slightly less than an inch in length; most recovered from the New York African Burial Ground were fragmentary, and their length, when intact, could not be accurately measured. Fragments of linen, cotton, or unidentified textiles were recovered in a number of instances. Fragments associated with buttons were generally interpreted as remnants of clothing fabric. Eighteen fragments were not associated with buttons and were interpreted by the researchers as possible shroud material (Howson 2009:260–261).

The use of shrouds was common at the New York African Burial Ground. Shrouding, as evidenced by the presence of copper-alloy straight pins in association with skeletal remains, was seen in 213 burials (68.7 percent of burials with sufficient preservation for pins to be observed). As wrapping the dead in winding sheets was a common practice for many Africans and Europeans of the period, the researchers suggest that, if not shrouded, a substantial number of individuals may have been buried in winding sheets. The use of shrouds for funeral attire was common among Europeans during the eighteenth century. Shrouds of the period "somewhat represented an open-backed nightshirt with a tie at the feet" (Howson 2009:259). Winding sheets either covered the entire corpse or revealed the face of the deceased (Howson 2009:259).

The presence or absence of a shroud was linked to the deceased's age and for adults, gender. Evidence for shrouding was common among infants, children, and adult females. Shrouding was less common among adult males but was still observed in nearly 50 percent of male burials for which preservation was sufficient.

The proportion of shrouded burials increased between the periods corresponding to the Early and Middle Groups. The researchers suggest, however, that owing to factors of poor preservation, many Early Group (pre-ca. A.D. 1735) individuals could have been shrouded (Perry, Howson, and Holl 2009a:133). On the other hand, shroud pins may have been less available during the early period. Negligible change was noted after the period corresponding to the Middle Group burials. The relatively higher proportion of shrouded female burials remained much the same through time (Howson 2009:248). Although females were more likely to be buried with pins, adult males typically had two or more pins preserved, and adult females buried with pins, fewer than two pins preserved. In the case of burials of small children or infants in shrouds, Howson (2009:248) suggests that because these would have required little cloth and few or no pins, the use of shroud pins may have held "ritual meaning beyond fastening. This meaning may have had to do with protecting the very young or with ensuring adequate means to make a spiritual passage."

Thirty-one adults and 13 subadults had pins only on the cranium. Howson (2009:257) suggests that these may have represented a chin cloth (used to prevent the jaw from falling open during burial) or possibly the pinning back of the shroud to expose the face. Roughly equal numbers of male and female burials, most of which were those of older adults, had pins on the cranium. Chin cloths were typically used in eighteenth-century England, although they were tied rather than pinned (Litten 1991:72; Rich-

ardson 2000:19). Howson (2009:257) suggests that "pinning the chin cloth suggests a variant practice." Overall, the most pins were found on the cranium, and this was particularly the case among adult males. Fewer pins were discovered at the jaw, neck, torso, or extremities. Pins at the torso were more common among females.

Body Placement and Orientation

Body placement and orientation were highly standardized. Of 269 burials for which the position of the body could be determined, all were supine (placed on the back), and the majority were extended. The hands were usually resting on the pelvis or at the sides (Figures 80 and 81). Occasionally, the arms were crossed over the chest. The researchers wrote that "the extended body position is so uniform at the African Burial Ground as to constitute, along with coffin burial and orientation, part of an accepted mortuary program" (Perry and Howson 2009:115). Of 375 burials for which orientation of the head could be determined, the researchers state that 367 (97.8 percent) were buried with their heads to the west or looking toward the east (Figure 82).

Others were oriented "head to east (n = 4), head to south (n = 3), and head to north (n = 1)" (Perry and Howson 2009:111). Nothing in particular distinguishes the non-westward-oriented burials. The burials included infants and adults of both sexes buried with and without coffins and shrouded and unshrouded burials as indicated by straight pins. None had culturally modified teeth. One individual was apparently disinterred, surgically altered, and reinterred after death, and was perhaps a victim of medical experimentation in the late-eighteenth century (Perry, Howson, and Holl 2009d:209–210).

Individuals placed in head-to-west orientation were generally oriented in a slightly southerly direction. The researchers suggest that the alignment of graves could have been guided by (1) the position of the sun at sunset; (2) the orientation of existing buildings; or (3) the orientation of neighboring graves. The researchers note that if graves were aligned according to position of the sun at sunset, more than 45 percent of graves would have been placed during the late spring or summer months (Figure 83). Fewer burials would have been placed during the winter. Alternatively, the researchers suggest that a generalized impression of where on the horizon the sun set may have been used. The setting of the sun over Lower Manhattan is

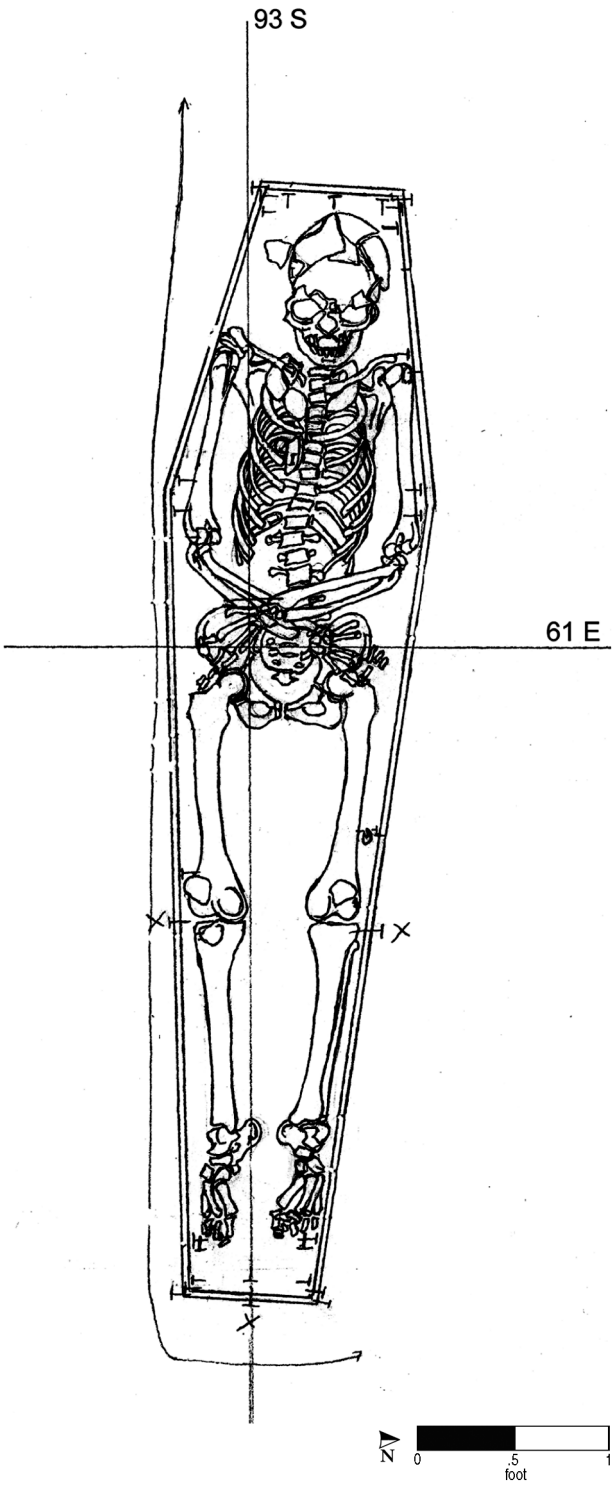


Figure 80. Burial of an 18–20-year-old female in extended supine position with hands crossed over pelvic region (Burial 122) (drawn by M. Schur, 1992) (from Volume 2, Part 2 [Perry, Howson, and Bianco, eds. 2009c:169]).

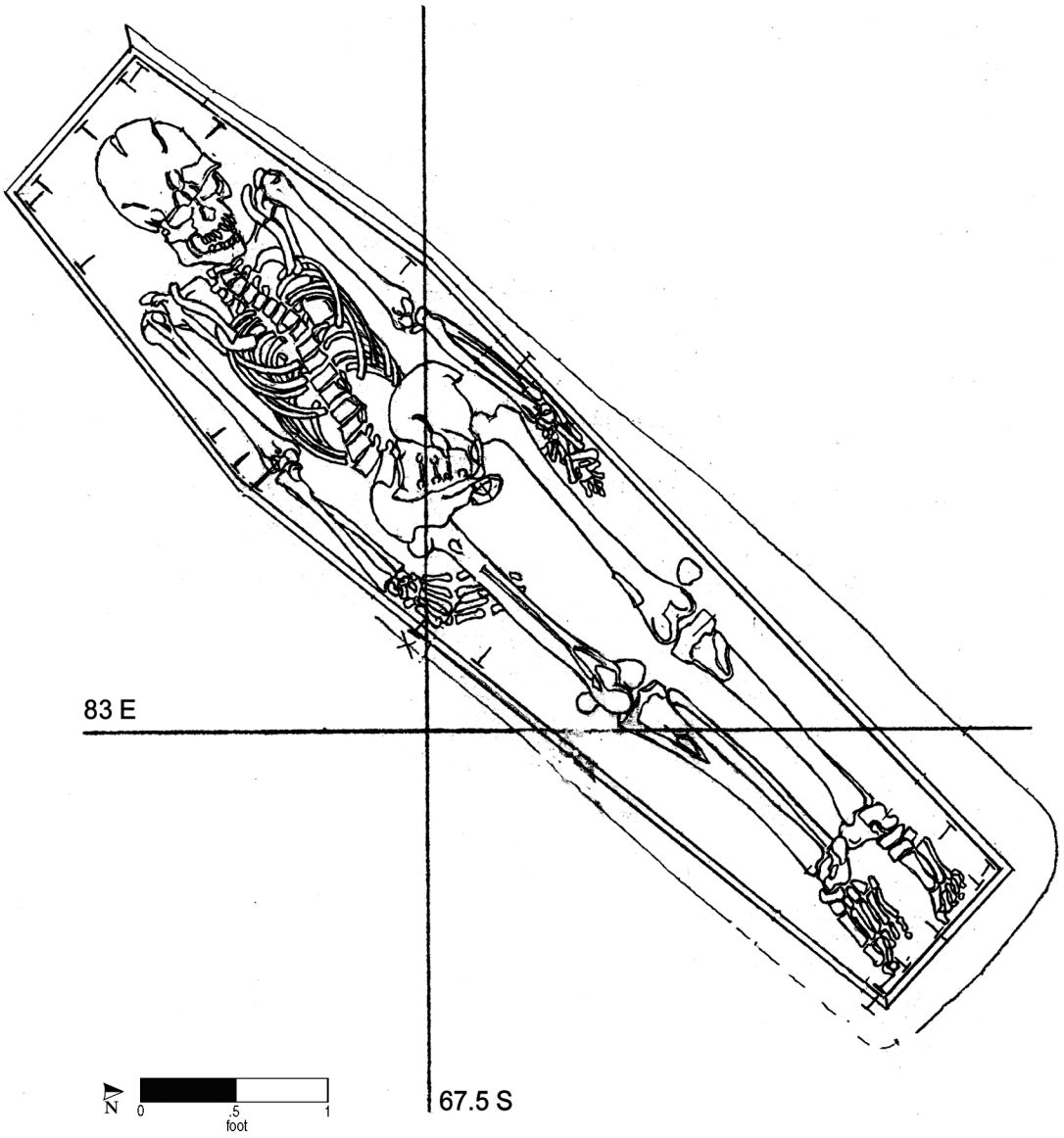


Figure 81. Burial of a 35–45-year-old man in extended supine position with hands placed at sides (Burial 151) (drawn by M. Schur, 1992) (from Volume 2, Part 1 [Perry, Howson, and Holl 2009d:Figure 105]).

most often slightly south of west (Perry and Howson 2009:111).

Another interpretation of the orientation data is that graves were aligned according to the orientation of streets, buildings, or property boundaries. The researchers suggest that many burials may have been placed perpendicular to the orientation of Broadway. Other burials may have oriented in relation to a fence line or the town palisades, both of which trended from southwest to northeast. Graves that were dug during a short span of time may have also shared orientation. Noël Hume (1982:36–37) proposed this explanation for parallel graves at Carter's Grove.

In his analysis of graves from Vredendal, February (1996:281) has written that "the burial position, possible shrouds and clothing with no formal grave goods as well as orderly marked graves with head and foot stones suggests a strong Christian missionary influence." For Christians, the head-to-west orientation allowed the dead on the day of the Last Judgement to rise facing the east. The use of niche burials, where the body was placed in a niche at the side of a burial shaft, was used at Vredendal in combination with the apparent Christian traits. Earlier burials in the southwestern Cape tended to be flexed and included niche body placement, suggest-

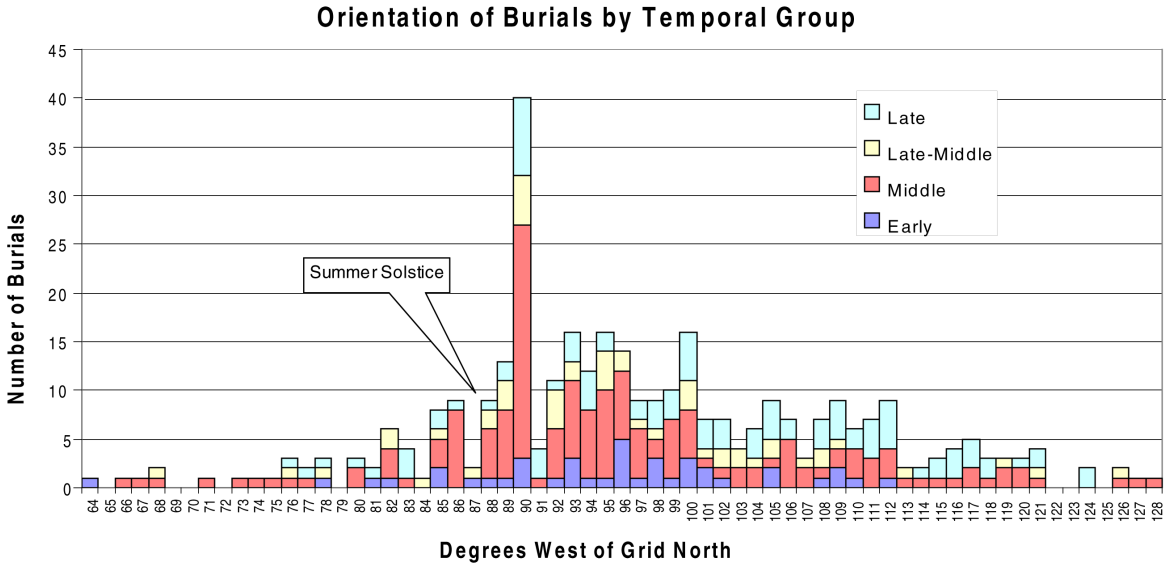


Figure 82. Orientation of burials with heads oriented to the west at the New York African Burial Ground (from Volume 2, Part 1 [Perry and Howson 2009:Figure 54]).

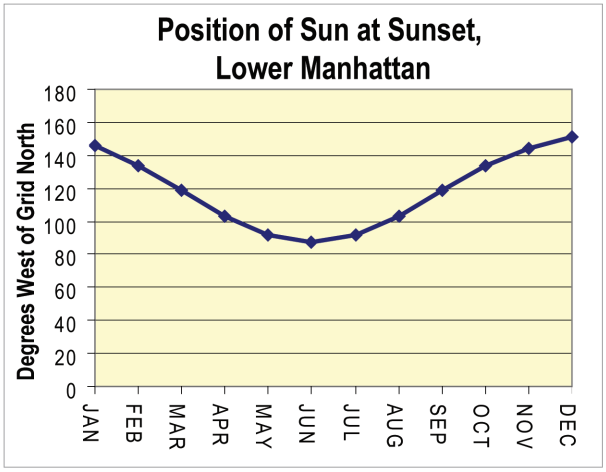


Figure 83. Position of the sun on the horizon at sunset in lower Manhattan over the course of a year, relative to the New York African Burial Ground site grid (from Volume 2, Part 1 [Perry and Howson 2009:Figure 55]).

ing a hybridization of some traditional and Christian influences. In New York City during the period the African Burial Ground was in use, many enslaved Africans were exposed to Christianity in their homelands and may have themselves been practitioners of local forms of Christianity (Medford, ed. 2009; Thornton 2001).

Grave Markers

Grave markers were used for children, adult women, and adult men at the African Burial Ground. Grave markers were rare, but three types were recorded: wooden posts, rectangular stone slabs, and rows of cobbles (Figure 84). The grave of Burial 194, a man aged between 30 and 40 years at his death, was marked with a cedar board nailed to the coffin headboard. The parallel alignment of many graves in apparent rows suggests that more graves may originally have been identified by such perishable markers. Some graves were marked with rectangular stone slabs placed at the head (Burials 18 and 23; possibly Burial 360), rows of small cobbles outlining the grave (Burial 13/43; perhaps Burials 22, 23, or 29), or both (Burial 47).

Cobble outlining was used throughout the African Diaspora (Thompson 1983:137; Vlach 1978:139–145) and appears to have African roots. A related

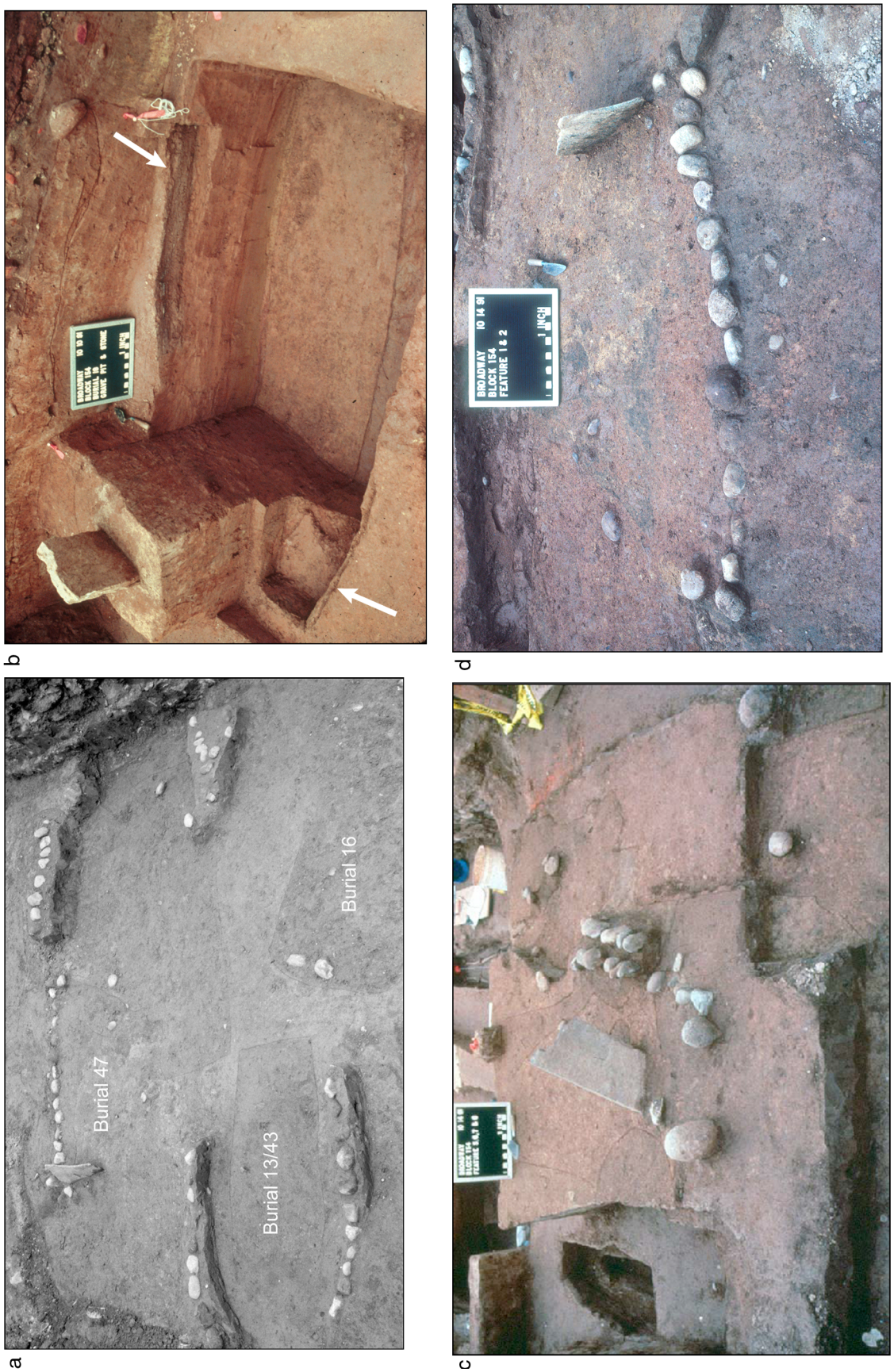


Figure 84. Grave markers: (*a*) burials marked with cobbles at the surface; (*b*) excavated grave of Burial 18 with stone marker in place at its west (head) end; (*c*) stone that appears to have been a marker for Burial 23; (*d*) vertical slab of stone found above Burial 47 and the line of cobbles along the north side of the grave (photographs by Dennis Seckler) (from Volume 2, Part 1 [Perry and Howson 2009:Figures 57 (*a*), 58 (*b*), 61 (*c*), 59 (*d*)]).

practice in Africa may have been the piling of stones atop graves. Medford, Brown, Heywood, et al. (2009b:22) note that in the 1660s, a European observer, Giovanni Antonio Cavazzi, observed that the Kongolese dead were buried in deep pits mounded with dirt and covered with a mound of stones. Piles of stones atop graves have been discovered at a cemetery in Kapanda, Angola (Gutierrez 1999), and atop possible graves at Parting Ways, a small community of free African-Americans established in 1794 in Plymouth, Massachusetts (Deetz 1996).

Graveside Deposits and Memorialization

It is important to keep in mind that mortuary rites may continue long after the actual burial event. The researchers noted that because of the field methods employed during the excavation of the New York African Burial Ground, the opportunity to document the location of the historical-period ground surface was lost. Historical-period features above grave shafts were only documented to a limited extent, and artifacts within grave shafts were rarely provenienced with enough specificity to determine their precise relationship to burial events. As a result, it was rarely possible to determine which artifacts may have been placed on coffins or placed on top of graves after grave shafts had been filled in. Also, many items that could have been placed within or above burials were perishable, such as wooden implements, food, or flowers, and would not have survived in the archaeological record. It is thus difficult to determine in many instances what mourners may have included in burials, placed on top of coffins, or placed on the ground surface of graves. Given the tendency of many African peoples to memorialize the dead through offerings, libations, and shrines, it seems likely that such behaviors also took place at the African Burial Ground.

Features could have also been placed above graves to communicate or interact with the dead. For instance, the Dutch merchant Willem Bosman (1721:223) noted in the late-seventeenth century that along the Gold Coast, mourners "generally build a small cottage or hut, or else plant a little garden of rice on the grave, into which they throw several worthless goods of the deceased, but not household stuff or other valuable moveables. . . . At Axim and other Places, they place several earthen images on the graves, which are washed one year after the funeral, when they renew the funeral ceremonies in as expensive a manner as the interment itself." Conceivably, some features, macrobotanical remains, and artifacts located at or near the eighteenth-century ground surface of the New York African Burial Ground could have been related to mortuary behaviors, rather than trash disposal or commercial and residential activities of the late-eighteenth century. Nonperishable objects, such as glass bottles, ceramic vessels, metal items, or specially chosen fragments of glass, ceramic, or metal, may have been placed on graves, but these items are not easily distinguished from nonmortuary materials using the current evidence. Owing to incomplete information, the association of artifacts or features discovered outside grave shafts with burials proved difficult to determine (see Chapter 2). Nonburial features and artifacts are described in a separate report (Cheek and Roberts 2007).

Terra-cotta heads that appear to match historical descriptions were recovered during an archaeological excavation of mid-seventeenth-century deposits conducted during the 1950s and 1960s at Ahinsan, Ghana (Vivian 1992:158). Modern informants suggested the heads were placed on a grave 40 days after burial. Clusters of deposits on a prominent hill at Ademanso (an ancient Adanse capital) consisted of ornate, stylized clay heads and pottery, along with fragments of "bowls, pots, pot stands, goblets, lids and handles, and large pendants." Vivian (1992:161) has suggested that these deposits are funerary deposits that represent the memorialization of deceased relatives. Similar ritual deposits were discovered at other sites in the Gold Coast region that are tentatively dated to the eighteenth or nineteenth centuries (Vivian 1992:162). Vivian has interpreted these deposits as resulting from the intensive and repeated use of the burial grounds by clan groups.

Similar graveside deposits have been noted in other parts of West Africa, West Central Africa, and in North America, where in all cases they "are seen as inviolate" (Deetz 1996:208). At Parting Ways, probable graves were covered with concentrations of cobblestones, fragments of ceramic or glass containers broken in place, a cut-glass decanter, pressed glass tumblers and saucers, and stoneware jugs. These graveside deposits bear a strong resemblance to deposits from cemeteries in West and West Central Africa, such as Akan ritual compounds in Ghana. Throughout the American South, African American

graves were marked with bottles and jars. These objects often have a hole broken through the bottom, suggesting ritual "killing" of funerary objects (Deetz 1996:208). Other forms of memorialization observed in North America include the performance of African-derived dances on the graves of ancestors at special times of the year (Fairley 2003:548, citing Stuckey 1987).

It is unfortunate that waste disposal by local potteries was so common at the African Burial Ground, as it desecrated sacred space and mixed trash into ritual deposits. The ubiquitous presence of waste and the lack of precise information on stratigraphy and artifact locations undermined the researchers' ability to recognize evidence of aboveground mortuary practices. Complete, nearly complete, and reconstructible vessels manufactured during the eighteenth century were discovered in deposits at the New York African Burial Ground, although many may have related to late-eighteenth and early-nineteenth-century residential or commercial use of the area (Brighton 2007). Some of the artifacts or features associated with secular use of the African Burial Ground (described in Cheek and Roberts [2007]) could potentially have been associated with sacred practices. In addition to artifacts discovered at or near the historical-period ground surface, some postholes that could not be definitively associated with fence lines could conceivably be related to shrines built to memorialize ancestors.

Mortuary Material Culture

Clothing and Ornamentation

Nonperishable fasteners thought to represent clothing, such as buttons, were relatively scarce and were present in only 42 burials. For 9 of those burials, the association was tenuous. This does not necessarily reflect the percentage of individuals who were dressed when interred; the researchers point out that many garments of the era were fastened with perishable drawstrings and ties or with pins, particularly women's garments (Bianchi and Bianco 2009:265, 283) (Figure 85). The majority of burials with nonperishable fasteners were adults, and there were many more adult men than women in this group. Inferred clothing items represented by fasteners included jackets, shirts, breeches, and possibly undergarments or nightclothes. Three aglets—small metal tubes that encased the ends of lacings and cords typically used on caps, shirts, and gowns—were found, having been interred with a child (Burial 22) and two women (Burials 213 and 342). A possible grommet that may have functioned as a clothing fastener was buried with a child (Burial 368). The only child buried with a button was a 6–10-year-old of indeterminate gender who was interred with one white metal button on the pelvis, suggesting breeches. Unfortunately, some of the preserved fasteners were not observed in situ. Cuff links and buttons occasionally were worn as ornaments; these examples are discussed below. Intriguingly, bits of leather and fragments of metal suggesting footwear were not recovered, and Bianco et al. (2009:324) have suggested that the deceased were not dressed in shoes. It may have been that shoes were too expensive to bury with the dead and were saved to hand down to the living. A common folk belief among today's population in the American South (both African American and Euroamerican) may have ancient roots. Writing of the Cedar Grove Baptist Church Cemetery in Arkansas (dating to the nineteenth and early-twentieth centuries), Rose and Santeford (1985a:41) have discussed the belief that "one should never bury anyone with shoes left on the feet."

The available information suggests that persons were dressed as well as shrouded. Some individuals with fasteners suggesting clothing had straight pins only on the cranium, indicating a possible chin cloth rather than a complete shroud. The majority of burials with pins, however, excluding the cases where pins may have fastened clothing, were interpreted as indicating a probable shroud.

Few burials were found with personal adornment in association with the remains. Only 25 individuals had a clear association with personal adornment (Bianco et al. 2009:321). The ornaments included beads, cuff links used as jewelry rather than clothing fasteners, rings, a pendant, and an apparent hair ornament fashioned of a glass disk set in a frame of wire filigree (found with the infant in Burial 186). Except for the pendant, which was silver, the metal ornaments were made of copper alloy or paste. Bianco et al. (2009) suggest that these items were relatively inexpensive and widely available when the African Burial Ground was in use. Ornaments were found with the burials of men, women, children, and infants. Personal adornment may have been acquired in Africa, along the routes by which Africans came to New York, or in the city (cf. Handler 2006, 2007).

Figure 85. Period clothing: (*a*) breeches with fall fronts over the center fly, from left to right: linen cotton (1765–1785), cotton velvet (1785–1825), and yellow "nankeen" cotton (1785–1815); (*b*) working woman's striped linen wool petticoat (1770–1820) topped by a high-waisted short gown made from cotton linen (1800–1820); (*c*) quilted petticoat (1770–1775) made in New York by Margaret Bleeker Ten Eyck; (*d*) self-enclosed casing for a drawstring, on a gown with set-in sleeves (1800–1810). (The Colonial Williamsburg Foundation) (from Volume 2, Part 1 [Bianchi and Bianco 2009:Figures 136 *(a)*, 137 *(b)*, 138 *(c)*, 140 *(d)*]).

Beads and Cowries

Medford, Brown, Carrington, et al. (2009d:88) note that "[in] many African societies, beads hold ceremonial significance at every stage of life: at birth, puberty, initiation, marriage, procreation, old age, death, and, finally, entry into the community of ancestors and spirits." Beads were found in several burials at the New York African Burial Ground. Some beads found at the New York African Burial Ground were characteristic of African manufacture, such as the opaque yellow beads forming a necklace placed with the infant in Burial 226, but most were of European manufacture. The child in Burial 187 was dressed in black beads made of glass manufactured in Europe and placed around the hips or arms. Regardless of where beads were made, "the presence of beads is an indication of the important expressive role they continued to play in the lives and death of New York Africans" (Medford, Brown, Carrington, et al. 2009d:88). Burial 340, an adult woman, wore two strands of beads primarily made from European glass in shades of blue and yellow, mixed with one amber bead and cowries. This woman had modified teeth worked into hourglass and peg shapes. The LA-ICP-MS elemental analysis placed this woman in Cluster C2, which the researchers interpreted as corresponding to individuals born in Africa. Strontium isotope analysis also placed Burial 340 in a group of apparent nonlocal origin (Goodman et al. 2009). Bianco et al. (2009:329) note that in Ghana and Nigeria, waist beads like those found with Burial 340 would have been worn as "foundation garments" that served to keep garments secure as well as "conceal a woman's figure." The waist beads would have been hidden from public view but visible to those closest to the wearer, "such as a husband or a sweetheart, and the women with whom she bathed and groomed" (Bianco et al. 2009:329). Glass beads like those described above were imported from Europe and reworked in African locales, and imported glass was used as raw material for powder-glass beads (Bianco et al. 2009; DeCorse 2001a:137; Ogundiran 2002:434–435). A single black-glass, round bead was found with Burial 250, an adult of indeterminate age and sex. It was the only such bead in the collection.

The cowries discovered with Burial 340 were the only cowries discovered at the New York African Burial Ground. Beginning around 1515, cowries were commonly imported into West Africa by European factors and had become fully monetized in the Bight of Benin region by the seventeenth century (Ogundiran 2002:438–439). In essence, cowries arrived with the Atlantic trade, became deeply embedded elements of West African economy and ritual behavior, and were imbued with symbolism that interwove traditional African cosmogonies with aspects of the Atlantic economy. In Yorubaland, billions of moneta cowries from the Indian Ocean were traded for enslaved Africans, to the extent that "cowries were often referred to as 'slave money' in the Bight of Benin" (Ogundiran 2002:440). This equation of cowries with enslavement and death was strong enough that some traditions in Benin relate that human life was converted into cowries and wealth was accumulated through enslavement and forcible labor. Some traditions in Benin, for instance, "speak of cowries as shell fished from the Atlantic Ocean using slave corpses as bait" (Ogundiran 2002:443).

Archaeological excavation at Ilora and Isoya in Nigeria revealed the presence of caches of cowries as well as the burial of large numbers of cowries with nine burials of adults. Ogundiran (2002:451) has suggested that "as grave goods, cowries could serve as a social and symbolic replacement of the personal belongings of the deceased based on the idea that cowries were the essence of wealth and self-realization." The association of cowries with the accumulation of wealth, enslavement, and death would not have been lost on enslaved Africans in New York. The precise meaning of cowries worn by the individual in Burial 340 may never be known, but it is certainly likely that they represent intimate material and symbolic continuities with West African roots.

Cowries also had associations with fertility and abundance and were popular for use in divination. In Yorubaland, divination was most often performed using a sacred divination chain (*òpèlè*) or a collection of 16 cowries (*éérìndínlógún*). Men used both forms of divination, but women were apparently practitioners mainly of *éérìndínlógún* (Ogundiran 2002:453). A necklace from Burial 72 at Newton Plantation in Barbados included dog canines, glass beads, cowries, fish vertebrae, and an agate bead in a configuration that suggests the use of the necklace in divination (Handler 1997; Handler and Lange 1978). An association with divination is not clear for the New York African Burial Ground string of beads and cowries, but it seems at least plausible that the adornments were associated in some ways with wealth, abundance, and perhaps fertility.

The blue beads interred with the woman in Burial 340 could also suggest adherence to African practices.

Blue beads and beads of other colors are common in African American archaeological assemblages (Stine et al. 1996). Owing to the prevalence of blue beads at African American sites and the connections with West Africa, investigators have hypothesized that these beads in particular functioned as ethnic markers (Otto 1984; Smith 1977) or spiritual symbols (Adams 1987), as well as noted their similarity to trade beads used in West Africa (Ascher and Fairbanks 1971). Stine et al. (1996:65) hypothesized that blue bead symbolism "represents the development of a uniquely African American practice." They suggested that the color blue was thought to have curative properties and that blue beads were used as "a form of protection against misfortune and sickness" (Stine et al. 1996:65). Blue bead symbolism was, however, also common in West Africa, including among Muslims, who apparently believed that blue glass beads repelled evil spirits (Kelly 2004:229; Ogundiran 2002:432; Singleton 1990:75). Blue beads were present at the New York African Burial Ground, but researchers also observed substantial variation in bead color, shape, and style (Figures 86 and 87). The variety of bead colors, shapes, and styles suggests that bead choices may have been dictated by personal, aesthetic, or ritual reasons. Beads were only discovered with a few individuals, making the inference of associations of beads with other attributes of burials or individuals tenuous.

Yoruba terminology distinguishes 15 kinds of beads on the basis of color, shape, and size, but 6 kinds of beads were particularly important to defining wealth, power and status. Five of these were in use before the development of the Atlantic economy: "the blue or blue and green translucent glass beads (*segi*) and their blue racelet (*kereu*) variant on one hand, and the red chalcedony beads (*akun*), and their jasper (*segida*) and carnelian (*ejiba/edigba*) variants" (Ogundiran 2002:432). Red coral beads were also important, but it is unclear if red coral beads were present before the advent of the Atlantic economy. Historical evidence shows that in the early-sixteenth century, the Portuguese bought tens of thousands of beads that may have been modified or manufactured in Ile-Ife and resold them at points along the coast of West Africa. Archaeological evidence for ancient bead manufacture was discovered immediately north of Ile-Ife, at Olokun grove (Ogundiran 2002:434–435). In the mid-seventeenth century, the blue and red bead types listed above were "indices of political status and wealth" that were distributed as "the prerogative of the Oba of Benin" (Ogundiran 2002:435). Studies of the symbolic meaning of beads in Yorubaland indicate that beads were considered to indicate wealth, good fortune, and spiritual well-being (Ogundiran 2002:436).

Ogundiran (2002:442) has argued that a pre-colonial Yoruba deity of the ocean/sea, Olokun, became in colonial contexts "the god/goddess of wealth, keeper of the rich storehouse of beads, giver of children, owner of a palace of cowries (riches) beneath the ocean, and the patron-deity of traders and potentates involved in direct trade with the European factors." The association of beads and cowries with Olokun could possibly link their usage as grave goods to facilitate the passage of the spirit through water or the return of ancestral spirits to African homelands by way of the sea. In Yorubaland, nonlocal commodities, such as "cowries, imported copper/brass, iron bars and cooking pots, chinaware, and beads of glass and exotic stone manufacture," tended to be associated with Olokun (Ogundiran 2002:442). The theme of a symbolic return to ancestral ties via water or bodies of water was also suggested by the presence of marine shell accompanying burials at the New York African Burial Ground.

Clam and Oyster Shell and Coral

Clam shells and oyster shells were commonly discovered in sediments deposited at the New York African Burial Ground. In many cases, pieces of shell became incorporated into deposits as a result of natural or non-mortuary cultural processes. The researchers identified, however, six cases for which sufficient evidence was present to infer the deliberate placement of shell artifacts within burials (Burials 22, 348, 352, 365, 387, and 405), in some cases, as possible composite artifacts consisting of a shell and an iron nail (Perry and Woodruff 2009:355–356). To the researchers, "the presence of shells suggests the continuation, in at least some aspects, of African spirituality and burial customs" (Medford, Brown, Carrington, et al. 2009d:88). Owing to similar symbolic associations in Africa and the African Diaspora, Perry and Woodruff (2009:355) infer that "shells at the New York African Burial Ground may have been placed as symbols of the deceased's passage through water to the spirit world and to represent his or her new identity as an ancestor."

Shell artifacts were deposited with men, women and children. A number of burials—Burials 22, 348, 352, 365, 387, and 405—had shells that were deliberately

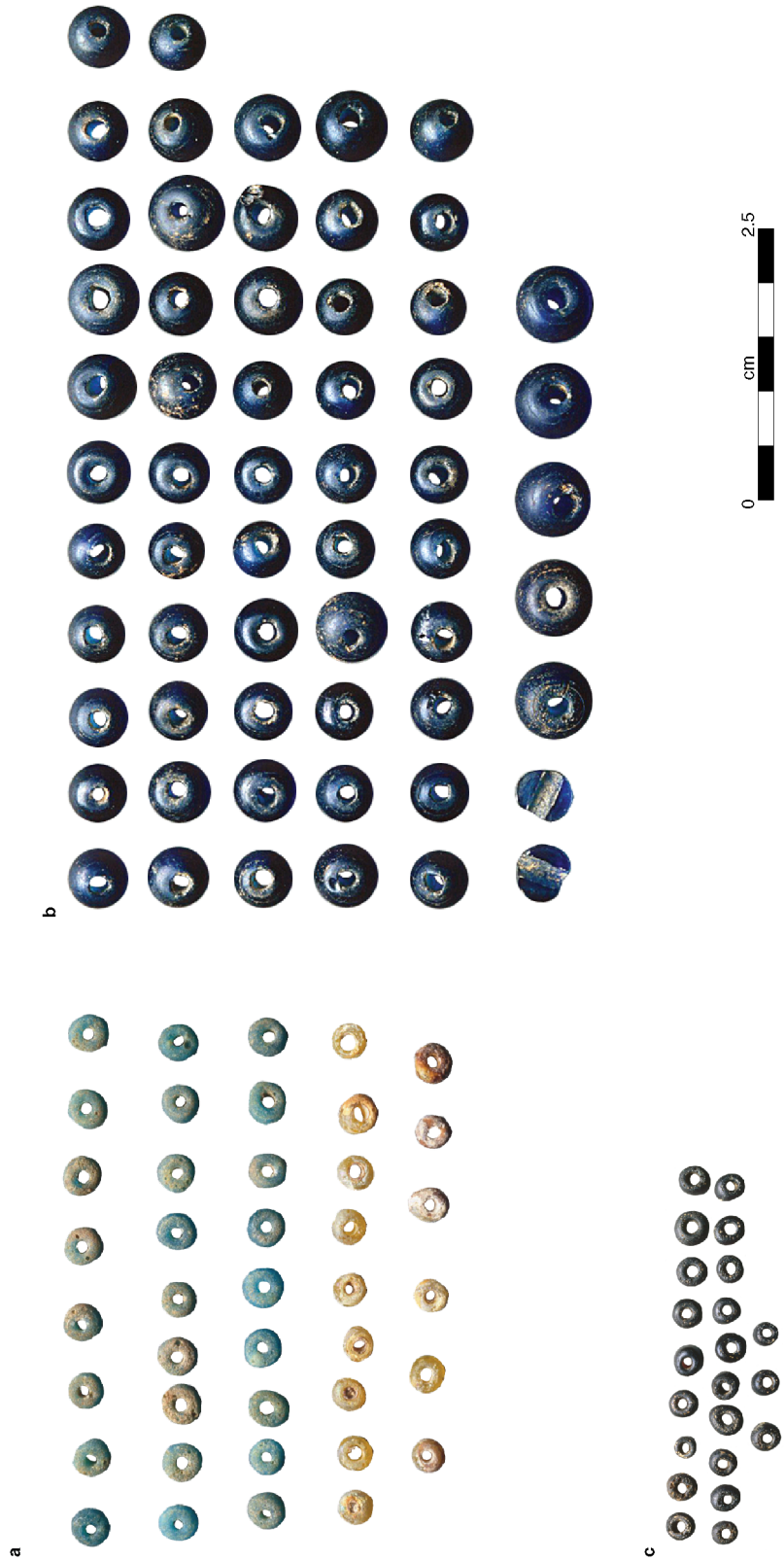


Figure 86. Bead Types 1, 3, and 2 from the New York African Burial Ground: (*a*) Bead Type 1, (*bottom two rows*), Bead Type 3 (*top three rows*) (all are from Burial 340); (*b*) Bead Type 2 (all are from Burial 340); (*c*) Bead Type 6 (all are from Burial 187, Catalog Nos. 0098-B.001–00988 B.022) (photographs by Jon Abbott) (from Volume 2, Part 1 [Bianco et al. 2009:Figures 231 (*a*), 232 (*b*), 235 (*c*)].

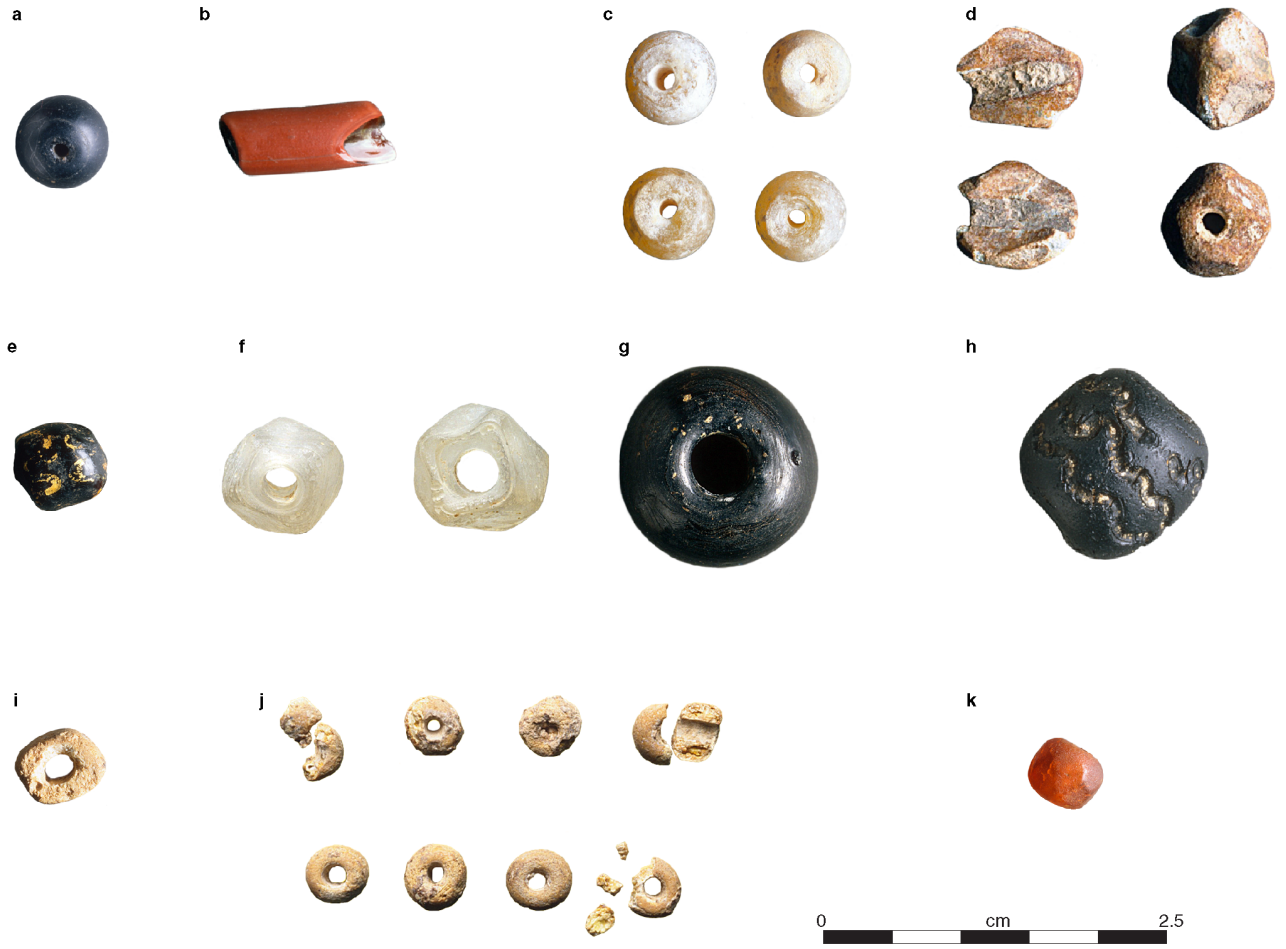


Figure 87. Bead Types 4, 5, and 7–15 from the New York African Burial Ground: (*a*) Bead Type 4 (from Burial 340, Catalog No. 01651-B.084); (*b*) Bead Type 5 (from Burial 107, Catalog No. 00850-B.003); (*c*) Bead Type 7 (all are from Burial 340, Catalog Nos. 01651-B.017, 01651-B.042, 01651-B.054, 01651-B.058, and 01651-B.061); (*d*) Bead Type 8 (all are from Burial 340, Catalog Nos. 01651-B.041 and 01651-B.53); (*e*) Bead Type 9 (from Burial 340, Catalog No. 01651-B.078); (*f*) Bead Type 10 (both are from Burial 428, Catalog No. 02115-UNK.001); (*g*) Bead Type 11 (from Burial 250, Catalog No. 01239-B.004); (*h*) Bead Type 12 (from Burial 340, Catalog No. 01651-B.079); (*i*) Bead Type 13 (from Burial 434, Catalog No. 02125-UNK.001); (*j*) Bead Type 14 (all are from Burial 226, Catalog Nos. 01212-B.001–01212-B.008); (*k*) Bead Type 15 (from Burial 340, Catalog No. 01651-B.075) (photographs by Jon Abbott) (from Volume 2, Part 1 [Bianco et al. 2009:Figures 233 *(a)*, 234 *(b)*, 236 *(c)*, 237 *(d)*, 238 *(e)*, 239 *(f)*, 240 *(g)*, 241 *(h)*, 242 *(i)*, 243 *(j)*, 238 *(k)*]).

interred with individuals. Burial 22, a child between 2.5 and 4.5 years old, had a fragment of local hard-shell clam, which may have been strung to a necklace placed near the child's neck (Figure 88). The child in Burial 22 clustered with individuals with dental modification in cluster C2 of the elemental-signature analysis, suggesting African birth (Goodman et al. 2009:108). However, the strontium isotope signature for the child and somewhat elevated lead levels suggest local birth. Perhaps, the individual's elemental signature reflects that of the child's mother, who may have been born in Africa. Burials 348, 352, and 365 (Figure 89) each had a composite artifact consisting of iron (probably iron nails) and oyster or clam shell placed on their coffin lids (Perry and Woodruff 2009:355–356).

Similar artifact deposits were discovered in Burials 387 and 405. A shell and a nail were discovered in association with cranial bones from Burial 405, a Middle Group (ca. A.D. 1735–1760) burial of a child between 6 and 10 years old. The child in Burial 405 clustered with 7 children and 5 adults with modified teeth in the elemental signature analysis but was not included in the strontium isotope analysis (Goodman et al. 2009:113). Burial 387, an Early Group (pre-ca. A.D. 1735) burial of a man between 34 and 44 years of age, had a whole oyster shell artifact placed on the coffin lid (Perry and Woodruff 2009:355). Given

Figure 88. In situ photograph of Burial 22, showing a fragment of hard-shell clam above the left clavicle (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 263]).

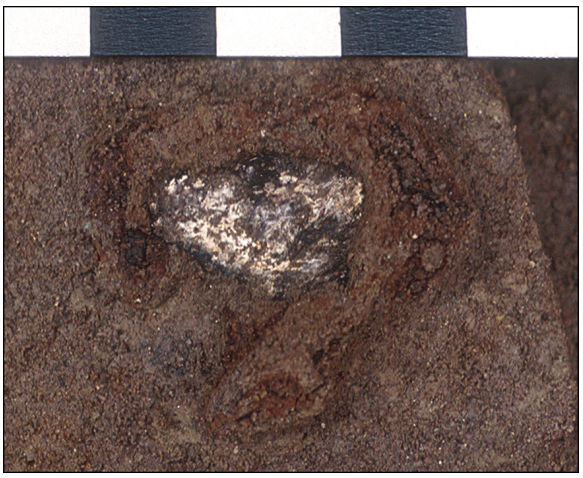


Figure 89. Detail of in situ photograph of shell and iron artifact from coffin lid of Burial 365. Scale is in inches (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 265]).

the co-occurrence of shell and iron artifacts in several instances and their association with coffin lids, it seems possible that these artifacts may have been parts of talismans intended to protect or guide the deceased. Another possible talisman was included with Burial 328, a Middle Group (ca. A.D. 1735–1760) burial of a woman between 40 and 50 years of age. She had a large stoneware sherd decorated with a blue spiral design placed on her coffin lid (Figure 90). Citing numerous sources, Perry and Woodruff (2009:363) noted that "there is abundant ethnohistorical, ethnographic, and archaeological evidence for this practice from West and West Central Africa."

A large coral artifact found in association with Burial 376, a Late-Middle Group (ca. A.D. 1760–1776) burial of a man between 45 and 65 years old, was determined not to be local in origin (Figure 91). The specimen was identified by Ann F. Budd, Ph.D., a Fossil Coral Taxonomist and Professor of Geology at the University of Iowa, as "*Siderastrea siderea*, an Atlantic species found mainly in the Caribbean, the Gulf of Mexico, and Bermuda" (Perry and Woodruff 2009:356). Perhaps this coral specimen was transported from the West Indies. Five other coral artifacts that could not be associated with particular burials were discovered at the New York African Burial Ground. Because coral species are not native to New York waters, they were likely manuported to the site. Perry and Woodruff (2009:356) state that "in keeping with the hypothesis that relics of the ocean may have been associated in multivalent fashion with Africa, the Middle Passage, and the spirits of the ancestors . . . the coral's place of origin became a clue to its spiritual, as well as archaeological, meaning." Given the spiritual, social, and economic importance of coral in West and West Central Africa, it is possible that coral artifacts not directly associated with burials were ritually deposited in association with burials or during the memorialization of previously buried Africans.

Figure 90. In situ photograph of stoneware vessel fragment, Burial 328 (Catalog No. 1589-GF). North is at the top (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 282]).

Figure 91. Coral (*Siderastrea siderea*) from Burial 376 (Catalog No. 1985-B). Weight is 190 g. Scale is in inches (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 266]).

Rings, Cuff Links, and Other Adornments

The researchers list a total of 30 burials that contained items they interpreted as personal adornments, including beads (discussed above), rings, possible earrings, cuff links, and some decorative buttons (Bianchi and Bianco 2009:Table 48). Buttons are common at many historical-period sites. Bone button backs were, in fact, manufactured near the African Burial Ground by residents of New York City's first Almshouse (1736–1797) (Baugher and Lenik 1997; Baugher et al. 1990; Cantwell and Wall 2001). At the New York African Burial Ground, a variety of button types was discovered in a total of 35 burials—copper-alloy buttons, domed copper-alloy buttons, bone-backed copper-alloy buttons, bone buttons, pewter buttons, wooden buttons with copper-alloy shanks, a stamped iron button, a leather button or button back, and a large Britannia button made on spun white metal (Figure 92). A few buttons had recognizable designs on their faces, such as the anchor motif on two buttons from Burial 6 (Figure 93). A few others, such as those in Burial 203, may have been faced with leather. In many cases, the locations of buttons within burials suggest they may have been used as clothing fasteners. The stamped iron button in Burial 371 may have been used in upholstery. In other cases, buttons could have been used as personal adornment or kept in conjuring bundles. Bianco et al. (2009:Table 53) identified buttons interpreted as possible personal adornments in 7 burials (Burials 6, 10, 181, 259, 325, 326, and 415). Most of these were made using copper-alloy materials, and a few had designs on their faces. Buttons discovered in other burials may have also been used as adornment or as ritual paraphernalia, but lack of precise provenience information made interpretation of their specific use uncertain.

Copper-alloy rings with glass or paste insets as well as paste rings were distributed widely and have been found in many colonial-era sites (Deagan 1987; Karklins 1992; Quimby 1966; Smith 1965; Stone 1974; Wood 1974; Wray and Schoff 1953). Rings were worn on the fingers and, in some cases, may have been part of other ornaments (Figure 94). Burial 377, an adult woman, had three rings at her throat. Burials 71, 115, 242, 310, and perhaps 398 wore rings on the right or left hand. All were women (Bianco et al. 2009). A ring was recorded in the field with Burial 39, a young child, but no ring was recovered in the laboratory, although copper residue was discovered clinging to a

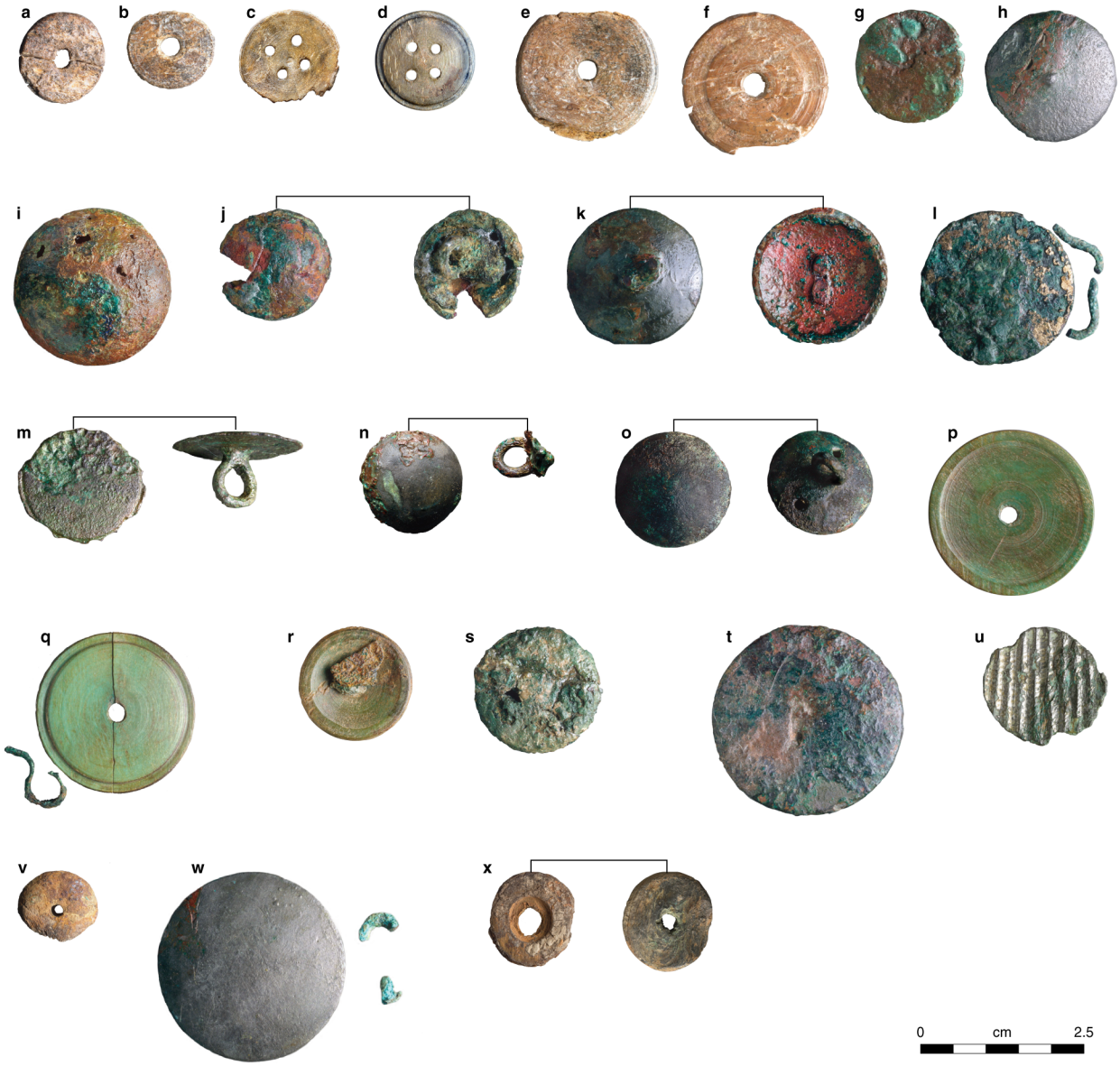


Figure 92. Button types at the New York African Burial Ground: (*a–d*) bone (Burial 37, Catalog No. 460-B.001; Burial 313, Catalog No. 1516-B.002; Burial 392, Catalog Nos. 2039-B.005, 2039-B.009); (*e*) bone with offset rim (Burial 313, Catalog No. 1516-B.001); (*f*) turned bone (Burial 171, Catalog No. 931-B.002); (*g–i*) copper alloy (Burial 191, Catalog No. 1081-B.001; Burial 250, Catalog No. 1239-B.001; Burial 415, Catalog No. 2097-B.006); (*j–k*) copper alloy, front and back (Burial 10, Catalog No. 234-B.013; Burial 214, Catalog No. 1191-B.002); (*l*) copper alloy with shank fragments (Burial 325, Catalog No. 1527-B.001); (*m*) copper alloy with applied loop shank, front and side (Burial 366, Catalog No. 1830-B.002); (*n*) copper-alloy dome button with shank fragment (Burial 379, Catalog No. 1906-B.003); (*o*) copper alloy, cast two-piece (Burial 403, Catalog No. 2067-B.003); (*p–q*) copper alloy with bone back (Burial 181, Catalog Nos. 967-B.002 and 967-B.003); (*r*) bone and copper alloy (Burial 181, Catalog No. 967-B.005); (*s–t*) copper alloy with zinc, nickel (Burial 181, Catalog Nos. 967-B.001, 967-B.008); (*u*) tin plated copper alloy (Burial 259, Catalog No. 1249-B.013); (*v*) iron (Burial 371, Catalog No. 1875-B.002); (*w*) Britannia button, spun white metal with copper-alloy shank (Burial 405, Catalog No. 2071-B.001); (*x*) wood, front and back (Burial 203, Catalog No. 1174-B.007) (photographs by Jon Abbott) (from Volume 2, Part 1 [Bianchi and Bianco 2009:Figures 154 *(a)*, 191 *(b)*, 208 *(c)*, 212 *(d)*, 190 *(e)*, 156 *(f)*, 167 *(g)*, 180 *(h)*, 223 *(i)*, 149 *(j)*, 174 *(k)*, 192 *(l)*, 200 *(m)*, 204 *(n)*, 218 *(o)*, 163 *(p)*, 164 *(q)*, 165 *(r)*, 160 *(s)*, 161 *(t)*, 184 *(u)*, 202 *(v)*, 220 *(w)*, 169 *(x, front)*, 170 *(x, back)*]).

Figure 93. Buttons recovered with Burial 6: (*left*) button, copper alloy, gilt (Catalog No. 219-B.001); (*middle*) button, copper alloy, gilt (Catalog No. 219-B.004); (*right*) diagram of anchor device (photographs by Jon Abbott) (from Volume 2, Part 1 [Bianchi and Bianco 2009:Figures 145 *(left)*, 146 *(middle)*, 147 *(right)*]).

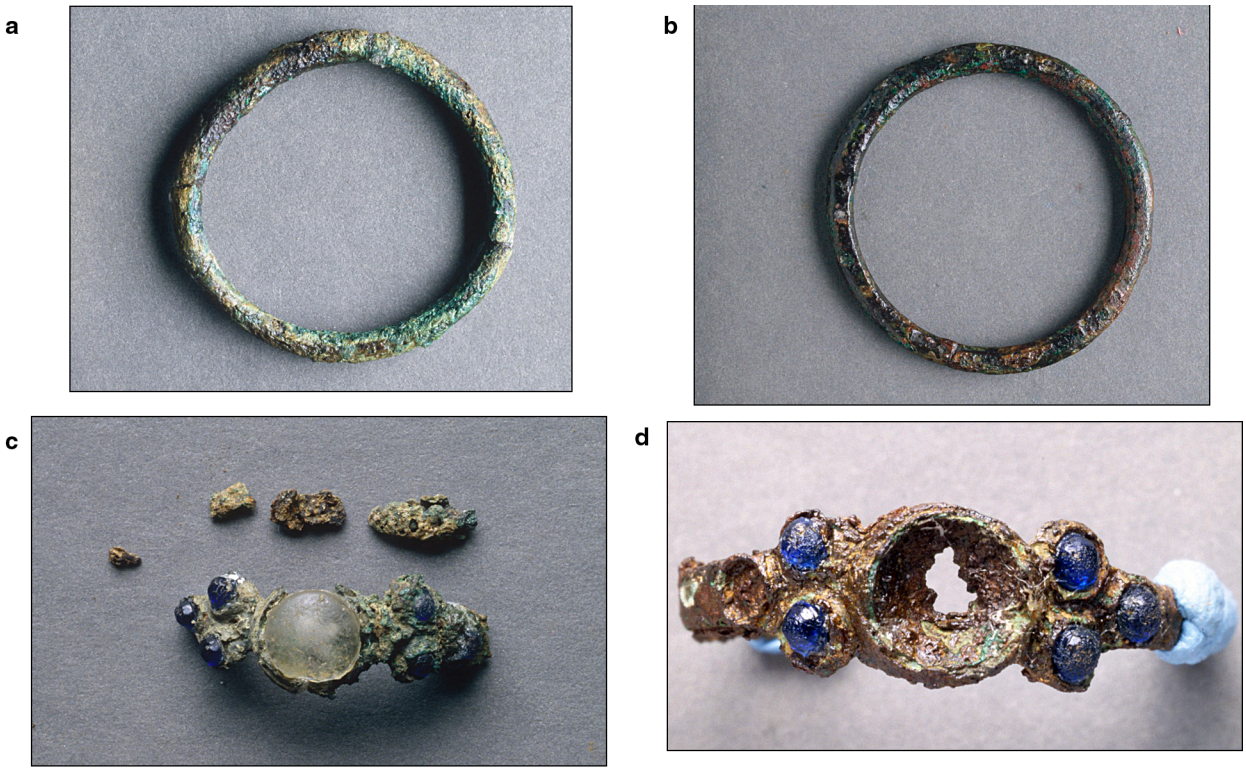


Figure 94. Rings recovered from the New York African Burial Ground: *(a–b)* plain copper-alloy rings (Burial 71, Catalog No. 813-B.004) ("Burial 398" [redeposited fill soil], Catalog No 2061-B.001); *(c–d)* copper-alloy-rings with glass insets (Burial 242, Catalog No. 1229-B.003) (Burial 310, Catalog No. 1486-B.001) (photographs by Jon Abbott) (from Volume 2, Part 1 [Bianco et al. 2009:Figures 246 *(a)*, 248 *(b)*, 249 *(c)*, 250 *(d)*]).

fragment of coffin wood. In at least one burial, rings may represent ritual paraphernalia rather than personal adornment. A cluster of seven small, copper-alloy rings was buried with an adult male aged between 55 and 65 years (Burial 147). The rings were found near three straight pins aligned along the man's humerus, suggesting rings may have been kept in a cloth bag or sack that was pinned to his garment. The researchers hypothesize that "the rings may have been part of a conjuring bundle of some kind" (Perry, Howson, and Bianco 2009:372).

Definitively associated cuff links or cuff-link faces interpreted as personal adornment were discovered in five burials (Figure 95). Most cuff links were buried with adult males, but enameled cuff-link faces were found with an adult woman buried without a coffin (Burial 371). Rather than representing fasteners, they apparently were part of a necklace or bracelet, as they

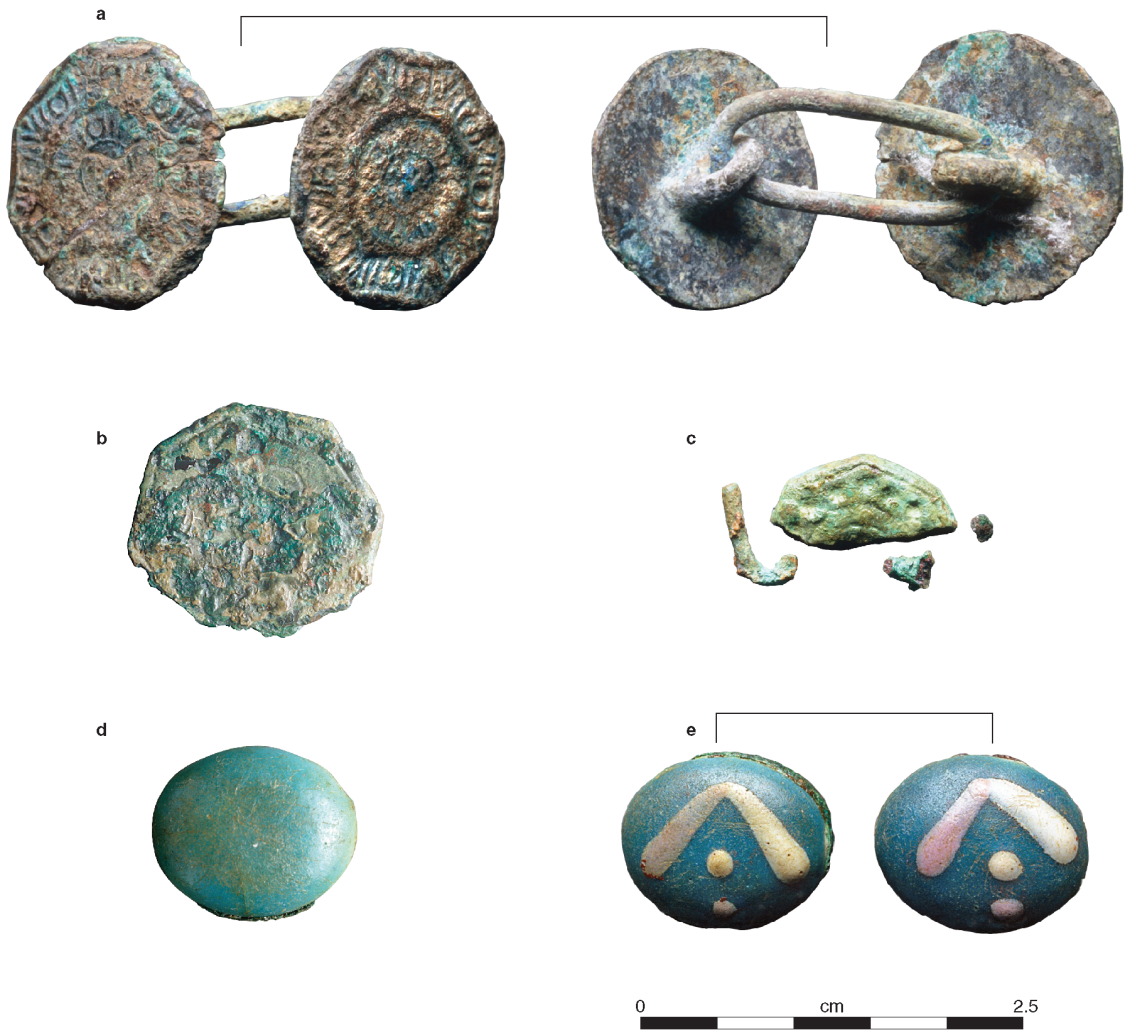


Figure 95. Cuff links recovered at the New York African Burial Ground: (*a*) front and back of cuff links, copper alloy (Burial 341, Catalog No. 1652-B.001); (*b*) cuff link, copper alloy (Burial 392, Catalog No. 2039-B.004); (*c*) button or cuff link, copper alloy (Burial 398, Catalog No. 2061-UNK.003); (*d*) jewelry/possible cuff link or button face, enamel (Burial 211, Catalog No. 1186-B.001); (*e*) enameled cuff link faces (Burial 371, Catalog No. 1875-B.001) (photographs by Jon Abbott) (from Volume 2, Part 1 [Bianchi and Bianco 2009:Figures 198 *(a)*, 214 *(b)*, 215 *(c)*, 254 *(d)*, 255 *(e)*]).

were discovered beneath the woman's left humerus, and may have originally been backed with leather or another perishable material. An enameled, turquoise button or cuff-link face with a copper-alloy backing was found below the chin of Burial 211, an adult who was a probable male. Its location indicates it probably was a button used on a shirt.

Earrings and necklaces were worn as personal adornment (Figure 96). A cast silver pendant that may have been worn as an earring was found near the mandible of the child in Burial 254 dating to the Middle Group (ca. A.D. 1735–1760). A curved copper-alloy object in the Late-Middle Group (ca. A.D. 1760–1776) burial of a probable male (Burial 332) may also have been part of an earring. The adult male in Burial 214, dated to the Late Group (ca. A.D. 1776–1795), may have been buried with a seed necklace. The excavators described this object but did not draw it, and the seeds were not positively identified in the laboratory before they were lost as a result of the terrorist attacks on September 11, 2001. Strings of beads worn as necklaces, bracelets, or waist strands were also interred with several individuals (discussed above).

Other Material Culture

Other material culture in mortuary context—including clay pipes, knives, and items that may have represented personal talismans or bundles used for healing or divination—were relatively rare. A complete,

Figure 96. Cast silver pendant in Burial 254, Catalog No. 1243-B.001: (*a*) upper portion has slightly twisted metal hoop 1.6 cm wide and 0.9 cm long attached to a sphere 0.9 cm in diameter: a jump ring is attached to the bottom of the sphere, from which hangs a pear-shaped dangle (photograph by Jon Abbott); (*b*) reconstruction of silver pendant from Burial 254 (drawing by C. LaRoche and R. Schulz) (from Volume 2, Part 1 [Bianco et al. 2009:Figures 252 *(a)* and 245 *(b)*]).

unused pipe was found with Burial 340, a woman aged 40–65 years at the time of her death (Figure 97). Of African birth, the woman in Burial 340 was dressed with beads about her waist and hips and perhaps her wrist (discussed above). Fragmentary pipes were found in two other burials (Burials 158 and 165) but their association with interments is unclear.

Figure 97. Clay pipe in Burial 340, Catalog No. 1651-B.134; bore diameter is $^{6}/_{64}$ inches (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 267]).

Pipe smoking was common among black New Yorkers of both sexes in colonial Manhattan. Notches in the teeth resulting from pipe smoking were observed in some individuals at the New York African Burial Ground, but not those potentially associated with smoking pipes or pipe fragments. Rather than signifying that an individual was a habitual pipe smoker, the interment of smoking pipes may have functioned to provision individuals with items they would need to carry out social or spiritual activities in the afterlife or to symbolize a change in ontological status. The unused smoking pipe in Burial 340 has analogs at other African Diaspora sites. Perry and Woodruff (2009:357) note that unused smoking pipes were interred with individuals from Seville Plantation in Jamaica (Armstrong 1999; Armstrong and Fleischman 1993) and at Elmina, Ghana. Perry and Woodruff (2009:357) observe that "it is noteworthy that in all of these cases the pipes in the burials had yet to be smoked" and that at least in the case of Burial 340, the pipe "may have been included as a talisman or a memento."

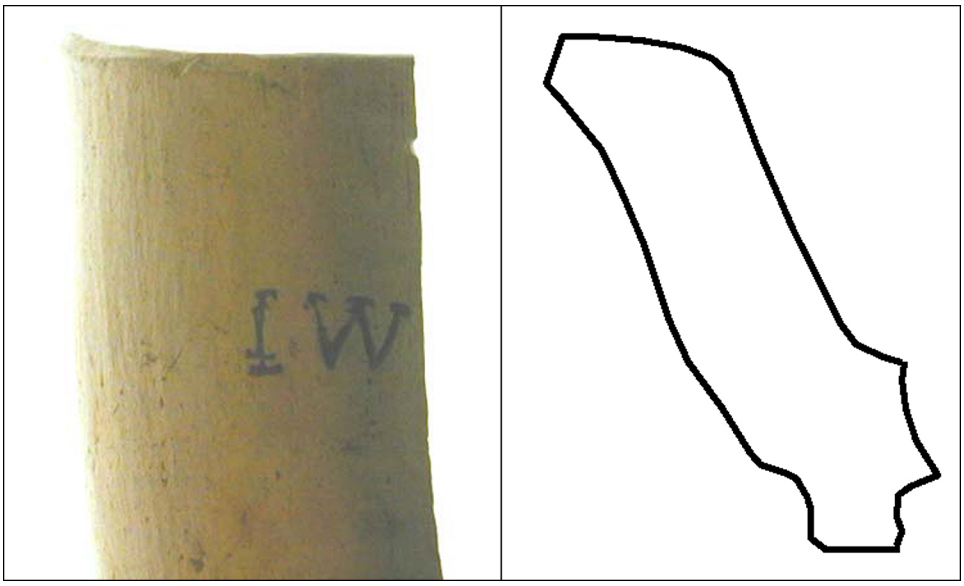


Figure 98. (*a*) Detail of clay pipe bowl, showing *IW* mark, from Burial 158 (Catalog No. 903-GF). Bore diameter is $^{5}/_{64}$ inches (photograph by Christopher R. DeCorse); (*b*) Drawing of bowl shape (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 268]).

Figure 99. In situ photograph of clay pipe stem and bowl near the left forearm of Burial 165 (Catalog No. 919-B). Scale is in inches (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 269]).

Figure 100. Clay pipe stem and bowl from Burial 165 (Catalog No. 919-B). Bore diameter is $^{4}/_{64}$ inches (photograph by Christopher R. DeCorse) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 270]).

Burial 158, a Late Group (ca. A.D. 1776–1795) burial of a man between 20 and 30 years of age, included a bowl fragment from a clay pipe and "a matched set of gilt copper-alloy cuff links" (Perry and Woodruff 2009:357). The pipe bowl fragment was marked with the initials "IW" (Figure 98). The researchers suggest that although the initials could have had something to do with the identity of Burial 158, the lack of a coffin and the presence of six pipe fragments (of varying bore diameters) in the grave shaft could indicate that the pipe was not deliberately placed with the burial (Perry and Woodruff 2009:357). The individual of undetermined age or sex buried without a coffin in Late Group (ca. A.D. 1776–1795) Burial 165 had bowl and stem fragments from a smoking pipe positioned near the left forearm (Figures 99 and 100). As in the case of Burial 158, it is uncertain whether these artifacts were deliberately placed in the burial to express something about the individual's identity or whether they were redeposited during grave digging. Interestingly, the elemental signature of the individual in Burial 165, who had modified teeth, clustered by itself and was different from that of any other individual in the elemental signature analysis.

Figure 101. In situ photograph of knife handle (Catalog No. 1191-B.005) and coin (Catalog No. 1191-B.003) from the left pelvic/forearm area of Burial 214. The coin is visible above the right side of the knife handle, lying on a fragment of coffin wood. Scale is in inches (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 276]).

Figure 102. Knife handle of bone or antler and iron, from Burial 214 (Catalog No. 1191-B.005). Length is 85 mm (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 277]).

Figure 103. X-ray of iron knife blade from Burial 48 (Catalog No. 620-CHC), shown at actual size (image courtesy of John Milner Associates) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 278]).

Strontium isotope values were high for both enamel and dentine for this individual, and lead levels were very low, suggesting the possibility of African birth and a fairly recent arrival in New York. Unused pipes have been found in other diasporic contexts as well as at Elmina, Ghana (Armstrong 1999:181; DeCorse 2001a; Handler 1997).

Knives were found with two burials. Burial 214, a Late Group (ca. A.D. 1776–1795) burial of a man between 45 and 55 years old, included an iron and bone or antler knife handle (Perry, Howson, and Holl 2009d:205; Perry and Woodruff 2009:361) (Figures 101 and 102). A knife blade also accompanied Burial 48, an Early Group (pre-ca. A.D. 1735) adult of undetermined age (Perry and Woodruff 2009:361) (Figure 103). Similar findings have been discovered in the burials of other enslaved laborers at African Diaspora sites. Perry and Woodruff (2009:361) note that an enslaved laborer at Seville Plantation in Jamaica, for instance, was buried with a knife in his left hand (Armstrong 1999; Armstrong and Fleischman 1993). In addition to being personal possessions, artifacts such as knives may suggest possibilities concerning the social roles people played in life. They may also have been included to protect or assist the deceased after death.

In addition to the knife, the man in Burial 214 was buried with a copper-alloy coin, tentatively interpreted as a George II halfpenny (Perry, Howson, and Holl 2009d:205; Perry and Woodruff 2009:353). Coins were found buried with three other individuals (Burials 135, 230, and 242), all of them mature individuals

Figure 104. In situ photograph of Burial 135, showing copper coin (Catalog No. 880-B.001) in left eye socket. Scale is in inches (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 256]).

Figure 105. *(a)* X-ray of coin (copper George II halfpenny, obverse) from Burial 135 (Catalog No. 880-B.001). Diameter is 30 mm. The left-facing profile and legend are faintly discernible on the surface of the excavated coin (X-ray by Metropolitan Museum of Art, supplied by John Milner Associates). *(b)* 1749 George II halfpenny from the numismatic collection at the University of Notre Dame Libraries (source: Jordan 1998) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 258]).

assigned to the Late Group (ca. A.D. 1776–1795). The 30–40-year-old man in Burial 135 had a copper-alloy coin placed over each eye. At least one (and possibly the other as well) was a George II halfpenny dating between 1727 and 1760 (Figures 104 and 105). He was also buried with a small mica schist disk that Perry and Woodruff (2009:363) suggest "may have been a game piece or perhaps a 'flash'" (see discussion in next section). Burial 230 contained a woman between 55 and 65 years of age who had two copper-alloy coins of different sizes interred with her. Because of their locations within the burial and the textile fragments that adhered to each coin, the researchers inferred that the two coins may have been placed on the eyes (and subsequently dislodged) or secured in a pocket or purse (Perry and Woodruff 2009:353) (Figures 106 and 107).

The Spiritual Significance of Items of Material Culture

Objects of possible spiritual significance included a calcite crystal, a quartz disk, a micaceous schist disk, shells, coral, a clay ball with a copper-alloy band, a tiny glass sphere, and a metal mass (Figures 108–111). Some of these items could have been individual charms or perhaps bundles of items used in ritual practice. The metal mass was discovered along with a black glass bead and an unusual copper-alloy button in the pelvic area of an adult of undetermined sex in Early Group (pre-ca. A.D. 1735) Burial 250, suggesting that the items may have been associated with each other and could have held symbolic or spiritual significance. The clay ball buried with Burial 375, a young adult woman, may have been contained in a pocket or a leather

Figure 106. Copper coin from Burial 230 (Catalog No. 1216-B.003). Diameter is 29 mm (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 260]).

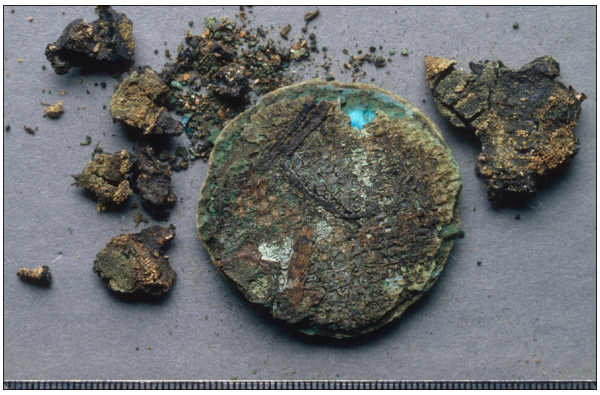


Figure 107. Textile from a possible shroud that had adhered to a coin from Burial 230 (Catalog No. 1216-B.002). The coin is 22 mm in diameter (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 135]).

Figure 108. Calcite crystal cluster in Burial 55, Catalog No. 0792-B.003 (width 3.5 mm) (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 279]).

Figure 109. Rose quartz disk in Burial 289, Catalog No. 1321-B.004 (diameter 7 mm) (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 280]).

Figure 110. Mica schist disk from Burial 135 (Catalog No. 880-B). Diameter is 6 mm (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 281]).

Figure 111. Glass sphere in Burial 410, Catalog No. 2082-B.001 (diameter 3.44 mm) (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 274]).

Figure 112. Ceramic sphere with copper alloy band in Burial 375, Catalog No. 1886-B.001 (diameter 17 mm) (photograph by Jon Abbott) (from Volume 2, Part 1 [Perry and Woodruff 2009:Figure 271]).

pouch on her right hip. If kept in a leather pouch, the artifact could have been part of a bundle of objects used in conjuring or divination rituals. The object is unusual in comparison to other discoveries at African Diaspora sites, but possibly similar to items alluded to in historical discussions (Figure 112). An anecdote cited by Chireau (2003:12–13), for instance, describes an incident in which a conjurer gave a clergyman a charm that the clergyman referred to as a "luck ball." The charm was intended to provide good fortune by increasing the clergyman's small congregation. In Brazil, a ball-shaped object with a thread tied to it was used in divination rituals performed by enslaved Africans with the intent to identify individuals guilty of theft (Sweet 2003:125).

Artifacts interred with individuals at the New York African Burial Ground are similar to objects discovered at other African Diaspora sites and could have possible functions related to divination, healing, or the passage of the spirit through water to the world of the dead. These kinds of objects are often discovered as collections or caches of items that appear to have been intentionally deposited in special locations, such as at thresholds or in pits associated with African American domestic spaces (Brown 1994; Fennell 2000, 2003; Ferguson 1992,1999; Franklin 1997c; Galke 2000; LaRoche 1994; Leone and Fry 1999, 2001; McKee 1995; Patten 1992; Samford 1996; Singleton 1995; Wall 2000; Wilkie 1995, 1997; Young 1996, 1997). At the Charles Carroll house in Carrollton, Maryland, for instance, the discovery of deposits "made up of quartz crystals, pierced discs, pierced coins, beads, pins, a rounded pebble, and a white potsherd with a blue asterisk painted on the interior bottom" were interpreted by Dr. Frederick Lamp (Curator of African Art, Baltimore Museum of Art) as items used by enslaved Africans "to control spirits who left the body at death and who wandered via water back to the sea, their ending point as well as their source" (Leone and Fry 1999:373). According to Leone and Fry (1999:372–373), some West Africans believed that spirits "could be directed to perform for humans by using material items that looked like water, death, or flashes of light." Among the Kongo peoples, "reflective surfaces of seashells, quartz crystals, and mica or mirror fragments were metaphoric of the water boundary of the living and the world of the spirits, and thus communicated the invocation of the spiritual forces into the world of the living" (Fennell 2003:14). Reasoning along similar lines, Perry and Woodruff (2009:363) note that the small (6-mm-diameter) micaceous schist disk found in Burial 135 could have served as "a game piece or perhaps a 'flash' placed for its reflective quality symbolic of water" (see Figure 110). If a "flash," the "mica disk may have been intended to attract the attention of African spirits" (Perry and Woodruff 2009:363).

It must be remembered, however, that the use of unusual objects as charms was not restricted to African-descended individuals. Distinctive stones and crystals, for instance, have been a source of fascination for many groups, including Native Americans and Euroamericans. Some Euroamericans used crystals or distinctive stones as protective amulets or to ward off evil spirits (Fennell 2000:286). X insignia similar to insignia identified in the bowls of spoons and on other items associated with diasporic Africans (Ferguson 1992, 1999) were also inscribed "on fence posts or walls to ward off evil spirits" by German immigrants (Fennell 2000:302).

Objects like those discovered at the African Burial Ground, as well as many other objects and materials—such as claws, teeth, clay, ash, nut shells, bird skulls, feathers, and roots—had special meanings associated with spirits or the attributes of spirits. Charms referred to in Kikongo as *minkisi* (*nkisi* in the singular), or *kiteke,* in Kimbundu "were often worn on the person, wrapped in skins, or were hung in houses as protection and for luck" (Thornton 2001:80). These objects held special ritual significance and were created and used in specific combinations in public and private rituals. Individual *minkisi* were "viewed as the container for a manifestation of an invoked spirit" and used in rituals of divination, protection, or healing that involved the invocation or control of spirits (Fennell 2003:14). When manipulated, *minkisi* enabled spirits to mani-

fest their power in healers through spirit possession. Protective charms were also sold to individuals by healers "to protect against wild animals, to protect the foundation of houses, to kill thieves, to protect crops, to ensure fertility, and so on" (Sweet 2003:105–106). Some *minkisi* were provided houses where members of the community could access them in times of need (Fennell 2003:14–15). New York Africans were also observed to use charms, a practice that invoked anxiety and fear among enslavers. For instance, in 1762 John Watts (1928:97) wrote that:

> Mr. Isaac Young-Husband has a Wench of mine in his hands called Belinda, middle aged but not very comely, she is a simple innocent creature & a very good Cook, has lived long in my family & indeed was a most necessary Servant, but her simplicity led her to triffle about charms which alarmed my female family too much to keep her [John Watts to John Riddell, November 27, 1762; quoted in Medford, Brown, Carrington, et al. 2009e:73].

Preparing the Dead for Burial, Mourning Rites, and Associated Ceremonies

It cannot be known for certain how the deceased were prepared for interment and what rites and ceremonies were used to bury them, for prayers, music, songs, and dance do not survive in the archaeological record. Archaeologists must rely on historical accounts and ethnographic observations to infer what nonmaterial rites may have accompanied the dead. This limitation of archaeology is particularly restrictive in the case of the New York African Burial Ground, because evidence for many funeral rites and ceremonies associated with African traditions would not have been preserved in the materials available for study.

The available historical evidence suggests that graveside rituals at the African Burial Ground were performed by Africans according to their own beliefs (Medford, Brown, Carrington, et al. 2009d:85). Chaplain John Sharpe wrote in 1712 that enslaved New York Africans "are buried in the common by those of their country and complexion without a Christian office; on the contrary the Heathenish rites are performed at the grave by their countrymen'' (Sharpe 1881:355). Writing in the nineteenth century, Valentine (1860:567) echoed this sentiment in writing that

> the negroes in this city were, both in the Dutch and English colonial times, a proscribed and detested race, having nothing in common with the whites. Many of them were native Africans, imported hither in slave ships, and retaining their native superstitions and burial customs, among which was that of burying at night, with various mummeries and outcries.

Legal restrictions imposed during the eighteenth century provide a glimpse into practices that were prominent enough to prompt restriction by colonial administrators. A 1722 law required that enslaved laborers who died south of the Collect Pond be buried during daylight hours, implying that Africans previously buried their dead at night (Medford, Brown, Carrington, et al. 2009d:89). Burial at night may have held spiritual significance or was necessitated by the requirements of work, but to many European New Yorkers, night burial was considered a disturbance and an opportunity to conspire and foment resistance. Before these laws were enacted, settlers complained that the feverish drumming and chanting accompanying night burial disturbed their sleep (Foote 2004:142).

Washing the body before clothing or shrouding is characteristic of European Christian, Muslim, and traditional African practices (Habenstein and Lamers 1963; Litten 1991). In most groups, gender and kinship play an important role in determining the people who offer this service to the dead. Among the Fante of coastal Ghana, the deceased is bathed by members of his or her matrilineage (Chukwukere 1981:62). In southern Africa, the in-laws of the deceased wash and drape the corpse (Vogel 1993:404). For Cameroonians of the late-nineteenth and early-twentieth centuries, death was polluting. As a result, mourners had to be cleansed and burial tools disposed of, and rituals to keep death away were performed (Jindra 2005:359–360).

Other ritual performances characteristic of some African burial practices included pouring libations, gifting mourners, and bewailing the dead. Gifts were sometimes apportioned according to kin relationships, thus reinforcing these relations (Chukwukere 1981:63).

Public weeping was customary among many African tribes, including the Yoruba, Ibo, Ibibio, and the Akan-speaking Asante, Fante, and Akwapim (Adjei 1943:89). Libations were poured before wailing began to propitiate the spirits, and there was a specific order

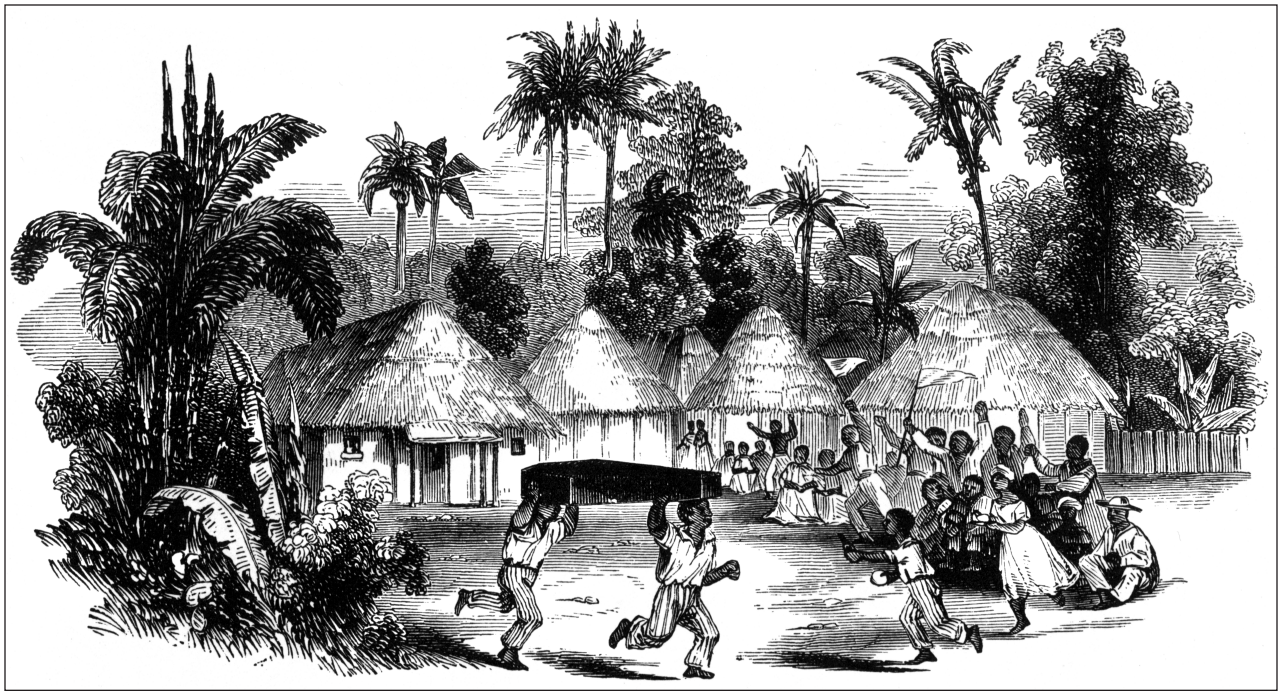


Figure 113. Divining the cause of death, an African funeral rite practiced in Jamaica (from Phillipo 1843) (from Volume 3 [Medford, Brown, Carrington, et al. 2009d:Figure 19]).

of wailing. Processions also were common among the Akan speakers. For Fante mortuary processions, the men of the deceased's patrilineage drummed, sang, danced acrobatically, and hung patrilineage flags over the body (Chukwukere 1981:62).

Another rite unlikely to leave evidence in the archaeological record is divining the cause of death or searching for signs of witchcraft (e.g., see Bosman 1721:217–220) (Figure 113). This common practice among West African peoples persisted in the Caribbean Islands and in New York (Medford, Brown, Carrington, et al. 2009d:86).

Along the Gold Coast in the late-seventeenth century, close relatives wailed loudly and cleansed themselves near the corpse; more-distant relatives as well as townspeople also participated in mourning rites. The wives of a deceased husband shaved their heads, covered themselves in white earth, dressed in rags, and roved from place to place in mourning. Loud wailing and large gatherings of mourners took place for several days prior to burial (Bosman 1721:220–222). After the burial of the deceased, the participants "drink and be merry, which lasts for several Days successively" (Bosman 1721:222). In Benin during the same period, relatives and enslaved laborers of the deceased mourned for a period of around 14 days, during which time they wailed, played musical instruments, and drank exuberantly. Participants in the funeral returned to normal activities after burial of the deceased, but close relatives continued to mourn in a similar manner for months afterward. The bodies of individuals who had died far from home were sometimes dried slowly over a fire to preserve them until the deceased could be buried in the proper place (Bosman 1721:417–418). In one instance in the Ivory Coast, Bosman observed the funeral of a superannuated woman who had died far from her place of birth. After 24 hours of mourning ceremonies involving all the people of the village, "an empty Canoe was brought just before the Dwelling of the Deceas'd, into which the Corps was laid; next which was placed a Pot of Rice, and another of Palm-Wine, in order to supply her, if she happened to be hungry or thirsty on her Journey; and after that the Canoe was filled with all sorts of green Plants" (Bosman 1721:446). After the woman was buried at her place of birth and the friends and relatives had returned home to the village where she had most recently lived, a large feast was held.

These few examples indicate that rituals surrounding the death of African individuals involved the structured interactions of individuals organized according to kinship and community membership. Involving numerous activities conducted over a long period,

these burial rituals were arrayed across a variety of places in addition to the place of burial. Obviously, the condition of forced servitude and the many restrictions placed upon enslaved laborers would have required New York Africans to alter the timing, duration, or intensity of mourning; the size of mourning parties; and the preferred location of burial, as well as reduce the lavishness of feasting or drinking and the offering of grave goods so as to accommodate the conditions in which they were forced to bury their dead (see Chapter 7). Nonetheless, it should be expected that aspects of these diverse practices could have been recreated in colonial settings to the extent possible. Much more work triangulating between historic accounts, later ethnographies, and African Diaspora archaeological finds will need to be done to achieve a more detailed, nuanced, and historically accurate understanding of the burial practices expected at different times and places in the African Diaspora.

Multiethnic Influences on Burial Practices

Native American

Local Native American burial practices differed from contemporaneous African practices and from those inferred to have taken place at the African Burial Ground. Late Woodland burial practices in New York involved burial in a flexed position, covering the grave with charcoal and shell, and placement of few grave goods with the deceased (Cantwell and Wall 2001:99). A seventeenth-century colonist noted that natives "fence their graves with a hedge, and cover the tops with mats, to shelter them from the rain" (Denton 1902:9). Another wrote, "They make a large grave, and line it inside with boughs of trees, in which they lay the corpse, so that no earth can touch it. They then cover this with clay, and form the grave, seven or eight feet, in the shape of a sugar loaf, and place palisades around it" (de Vries [1642] in J. F. Jameson [1909:223]). Some Native Americans in New Netherland collected together the bones of their ancestors, cleaned them, and bound them up in small bundles.

> They dig a square grave, the size and length of the person, and over it erect four pillars, which they cover with the bark of trees . . . they set a time when they will bury the body, when all the friends will have a great gathering, and bring ample supplies of provisions, accordingly as is prescribed by their village, that a great festival is to be held, with frolic and dancing. This festival continues some ten days, during which time their friends come from other nations on all sides, in order to see it held, and the accompanying ceremonies, which are attended with great expense [de Vries 1642, quoted in J. F. Jameson 1909:224].

Archaeologists have recovered similar graves surrounded with postholes (Solecki 1947:48).

Other practices involved secondary burial after exposure. The bones of the dead apparently were bundled and brought back to the home settlement if a person died away from home (Cantwell and Wall 2001:100). Some groups buried bone bundles in ossuaries (Kaeser 1970) and disinterred the bones when moving to new settlements (Heckewelder [1876:92], referring to Nanticoke) (Cantwell and Wall 2001:102).

At the New York African Burial Ground, a possible element of traditional Native American practices can be inferred in the treatment of Burial 377, a woman aged 45–50 years old. This woman, who was placed in the Late-Middle Group (ca. A.D. 1760–1776), appears to have been buried without a coffin. She may have been wrapped in matting, blankets, or some other perishable, organic material that left organic stains resembling wood. (Similar material, interpreted by the excavators as possible deteriorated coffin wood, was discovered in Burial 381, a nearby burial of a young adult assigned by default to the Middle Group, ca. A.D. 1735–1760.) A substance identified as red ocher stained the organic material and the woman's head, ribs, and scapulae (Perry and Howson 2009:125). The woman also was wearing three copper-alloy rings as part of a necklace. This placement was unusual; among other individuals, rings worn as ornaments were placed on the fingers. Otherwise, the disposition of Burial 377 was not dissimilar to the typical New York African Burial Ground practice of extended supine inhumation with head to the west.

Burial 377 was not included in the Sr isotope studies or the trace element analysis; she did, however, have culturally modified teeth, as indicated by mesial filing (Goodman et al. 2009:108). The lack of a coffin, the possible matting, and the possible red ocher imply that this woman could have been buried according to Native American tradition. Red ocher was widely used by Native Americans throughout eastern North Amer-

ica in their funeral rites; it has long been symbolically associated with death and rebirth. If African, perhaps she was the wife of a Native American man or was buried according to an African tradition that also made use of red ocher and burial matting. Alternatively, the red ocher-like substance and possible matting could have been the products of deterioration of a decorated coffin, in which case her burial would not be suggestive of local Native American practices.

Islam

A large percentage of enslaved Africans who were forcibly migrated to New York embarked originally from Senegambia, where Muslim factors were especially active (Medford, ed. 2009). It might be expected, then, that many individuals buried in the African Burial Ground were exposed to Islam in Africa or the Americas and may have participated in religious practices associated with Islam (Gomez 1994:684, 2005). Although it would not be unexpected to find evidence of Muslim ideology or burial practices at the African Burial Ground, this was not the case.

Sub-Saharan Africa was historically linked to the Mediterranean and Muslim worlds before the advent of European colonialism. As early as the seventh century, Muslims traveled across Africa, and Islam began to spread, spurring the development of Islamic kingdoms in Ghana, Mali, and the Songhay Empire of northwest Africa (eleventh to fifteenth centuries). At the same time, Muslim scholars, travelers, and warriors brought the chattel-slave trade to the savannahs (Alexander 2001:49; Şaul 2006; Skinner 1978).

High mobility and a long history of interactions resulted in deep historical linkages between Islamic and some traditional African religions (Şaul 2006:4–5). In many areas of Atlantic Africa, Islam was an eclectic belief system. Esoteric knowledge of divination practices, for instance, were shared among Muslim pilgrims and practitioners of traditional African religions, such as the Yoruba and Fon. A Muslim form of divination known as *khatt ar-raml*, or sand writing, that was practiced widely in sub-Saharan Africa beginning in the thirteenth century (Brenner 2000:154) is very similar to Ifá divination, which developed in Ile-Ifa among the Yoruba and became widely used by the Igbo, Nupe, Fon, and Ewe (Bascom 1969; Brenner 2000:160; Morton-Williams 1966).

When first encountered by the Portuguese during the fifteenth century, inhabitants of the Senegambia region, including the Fula, Jolof, Mandingo, and Tukalor peoples, followed a mixture of Islamic and local religious traditions (Sweet 2003:87–88). Although adherence to Muslim practices was often voluntary, some Africans enslaved by Muslims were forced to convert to Islam. Others were persecuted by the Portuguese Inquisition for their Islamic faith. The forcible migration of people with Muslim or mixed belief systems is an important component of African Diaspora religion that has often been overlooked in the historiography of the African diaspora (Gomez 1994, 2005). Many enslavers in North America referred to enslaved Africans from Senegambia and Sierra Leone as "Mandingos" and, by the nineteenth century, "the terms 'Mandingo' or 'Mandinga' were synonymous with Muslim" (Gomez 1994:685). Observers noted that Muslim holy men and traders who practiced *gris-gris* lived in every town along the Sierra Leone coast (Medford, Brown, Carrington, et al. 2009e:67). Central Africans forcibly migrated from Angola, Cabinda, Congo, and Gabon were less likely to bring Muslim-derived belief systems with them to the Americas (Sweet 2003:104). Medford, Brown, Carrington, et al. (2009e:67) report that, whereas many coastal West African communities remained outside Muslim influence in the seventeenth century, this changed in the eighteenth century.

Africans in the New World practiced Islam as well, including in New York (Gomez 1994, 2005; Medford, Brown, Carrington, et al. 2009e:73). Anthony Jansen Van Salee, a person of mixed Dutch and Moroccan ancestry who settled in New Amsterdam in 1633, was described in official records as a "black Mohammedan" (Foote 2004:41; Gomez 2005).

Muslim burial traditions prescribe "an essentially uniform burial rite," but variation in mortuary practices occurs throughout the Islamic world, based on the perspectives of different Muslim schools of thought and historical context (Insoll 2003:17). The spirit of the burial, however, is much the same in that Muslim burials, unlike the burials of other traditions, are intended to be "straightforward, unostentatious, and simple" (Insoll 2003:17). In many Muslim burial traditions, the body of the deceased is washed and perfumed immediately after death and then is covered with a cloth or dressed in grave clothes. For many Muslims, a *kafan,* called *kubba* in West Africa*,* is the only covering allowed, and no jewelry or other ornament may be worn.

Traditionally, Muslims did not use a coffin or casket (Perry, Howson, and Holl 2009d) although they were wrapped in shrouds, preferably made from

"unstitched white cloth" (Howson, Bianco, et al. 2009:63). Muslims shrouds could require several yards of cloth because multiple wraps were needed to cover the entire body. Due to the large amount of cloth needed, Howson (2009:260) concludes that "the outlay for a proper shroud would have been prohibitive for African Muslims living under slavery in colonial New York." In Muslim burials, the deceased is positioned to face Mecca and placed on the right side. This burial configuration is sometimes accompanied by either a narrow grave shaft or bricks used to support the body on its right side (Insoll 2003). Muslims bury the deceased as soon as possible after death, and it is preferred for a Muslim to be buried close to where he or she died and not be transported to another location. Howson, Bianco, et al. (2009:63) note that "in Islamic tradition, men wash and cover men, and women wash and cover women." Graves are typically shallow so that the deceased can hear the call to worship but deep enough "to allow the corpse to sit up for its interrogation by the angels Munkar and Nakir and thus gain entry to paradise" (Insoll 2003:17). Unostentatious stone or wood grave markers were typically allowed only to be placed above where the head of the deceased was positioned, or not at all, but "in reality [there is] great variety with regard to grave markers" (Insoll 2003:17). For instance, stones used to mark the location of head and feet as well as grave goods (mainly among women in the form of jewelry) have been associated with Islamic Bedouin burials dating between the fifteenth and nineteenth centuries in the Near East (Zias 2000). Moreover, the blending of Islamic and other African religious traditions in West Africa could have resulted in burials that display a mixture of traits related to multiple traditions.

Archaeologists have used characteristics considered diagnostic of Muslim burial practices—right-side position, burial without a coffin, absence of grave goods and markers—to identify Muslim burials in multiethnic cemeteries. Burials in the Cobern Street cemetery in Cape Town, South Africa, inferred on the basis of isotopic analysis to be enslaved Muslims from the Indian Ocean regions were placed on their right sides facing Signal Hill, a local feature of importance to Muslims (Cox et al. 2001:81–90). They were buried without shrouds or grave goods. By contrast, burials thought to represent non-Muslim enslaved persons of African descent, again based on isotopic analysis, were wrapped in shrouds as indicated by presence of pins, placed on their backs with arms extended at their sides or folded over the pelvis, and dressed in clothing, as shown by the presence of buttons (Cox et al. 2001:80–81). These individuals also were buried with personal goods, such as pipes and knives (Cox et al. 2001:91).

In contrast to practices attributed to Muslims, the deceased interred in the New York African Burial Ground were commonly shrouded, typically placed in coffins, and never placed on the right side, at least among the undisturbed burials. Grave markers were used, and some individuals were apparently buried with personal goods. Further, the few descriptions of African burial practices in New York indicate transportation of the body to the African Burial Ground and fairly boisterous activities that may have involved wailing. Together the known material and behavioral attributes of burials placed in the New York African Burial Ground suggest that Islamic beliefs, if they indeed were held among the population, were not commonly expressed in excavated portions of the burial ground.

One possible Muslim burial was observed with Burial 237/264. The unusual head-to-south orientation of Early Group (pre-ca. A.D. 1735) Burial 237/264 was interpreted by Perry, Howson, and Holl (2009a:146) as possibly representing a Muslim adult of undetermined age or sex who was "originally placed on the side and meant to face east." The general lack of evidence for Muslim burials at the New York African Burial Ground could suggest that if buried in the African Burial Ground, Muslims were not buried in the excavated portion.

Christianity

As with Islam, aspects of Christianity were practiced alongside African religious traditions in some areas where enslaved Africans originated. This was particularly the case in West Central Africa, where Christians had begun proselytizing in the sixteenth century (Butler 2000). Christianity was also practiced in the creole societies of the Atlantic coast that developed as a consequence of the trade in enslaved Africans. Medford, Brown, Heywood, et al. (2009b:19) suggest that Christianity became a main indicator of social status in Kongo, where "significant numbers of Central Africans lived in communities where Christianity, European languages, dress, foodways, and other cultural practices interacted."

The Kingdom of Kongo officially converted to Christianity in 1491 with the conversion of the prin-

cipal king of the Kongo, Mzinga Mbamba (Butler 2000:26). Afterward, the Kongo became the "center of Central African Christianity" (Thornton 2001:83). Thornton (2001:72) has argued that as a result of Portuguese missionary activities in the Kingdom of Kongo, "hundreds of thousands of central Africans practiced a local form of Christianity." Before the African Burial Ground formed, "most of the people in Kongo identified themselves as Christians and were usually accepted as such by visitors" (Thornton 2001:83). The Dutch, in the 1630s, for instance, described the people of Kongo as fully Roman Catholic; they knelt before wooden crosses, kept rosaries, and prayed in Christian ways (Thornton 2001:83).

The Christianity that developed in Kongo, however, was not the same as the Christianity of the Portuguese who brought it or that of the Dutch or the British. Christianity in Kongo retained elements of traditional religious practices and beliefs. The Portuguese, in fact, characterized the people of Kongo as not fully Christian, although this characterization was in part used to justify war against non-Christians (Thornton 2001:83). Forms of Christianity practiced in Manhattan were also considerably diverse, owing to the diverse ethnic and religious backgrounds of the settlement's inhabitants (Foote 2004:92). Enslaved Africans arriving in New Amsterdam and later, New York City, would have been confronted by multiple approaches to Christian religious practice, many of them Protestant in organization, with members who were described by visitors as not particularly pious or reverent (Foote: 2004:32). The Catholic experience of some enslaved Africans could have stood at odds to Protestant practices in the settlement.

In Kongoland, the melding of Kongo traditional beliefs and Christianity was achieved through careful accommodations of ritual and terminology that enabled multiple belief systems to exist side by side. Fundamental differences existed between Kongo traditional beliefs and Christian beliefs. A major difference between Christian and Kongolese belief, for instance, was the widespread West Central African belief that the ancestors were not permanently removed to a distant heaven but occupied an active role in the world of the living (Thornton 2001:85). While performing Christian rituals, the Colonial period Kongolese "continued to visit their ancestors' graves and seek luck, health, and blessing. They respected the territorial deities that they sometimes came to identify also as Christian Saints, but sometimes worshipped separately. They sought out witches to destroy, and resisted attempts of missionaries to describe all these activities as witchcraft" (Thornton 2001:84).

The participation of African-descended people in Christianity varied through time while the African Burial Ground was in use, depending on prior experience with Christianity and varying attitudes among the Dutch and the British. Under Dutch rule in New Amsterdam, Africans were welcomed into churches, encouraged to marry according to Christian practice, and had their children baptized. The Dutch Reformed Church insisted that the Dutch Calvinist enslavers in New Netherland should be "responsible for instructing their Negroes in the Christian Religion and that time should be provided for all Negroes to assemble in a suitable place in order to receive instruction from a catechist" (Foote 2004:43). The Dutch Reformed Church insisted, however, that Native Americans and Africans be instructed in religion and make a confession of faith before baptism. "As a consequence of these restrictions, few adults of African descent were baptized and admitted to membership in New Amsterdam's Dutch Reformed Church. Between 1639 and 1655, the Dutch Calvinist ministers baptized only 57 converts of African descent; of that number, 49 converts were children. Conspicuously, they baptized no African-descended people between 1656 and 1664" (Foote 2004:47–48). Of the 49 children, the majority were likely offspring of free New Amsterdam Africans (Foote 2004: 250 n. 94).

Church participation of African-descended people waned when the British took control of the colony. A small Lutheran congregation continued to welcome people of African descent, but for the most part, African worshipers were not taken seriously (Goodfriend 1992:125). As Foote (2004:126) has pointed out, New York's first slavery law proclaimed that "No Christian shall be kept in bondage." European New Yorkers were therefore conflicted over their moral imperative to Christianize "heathens" and their desperate need for labor in British New York. No doubt, many Africans who turned to Christianity did so out of the hope that conversion would release them from bondage (see Chapter 7). A law enacted in 1706 ended this hope, stating that the baptizing of enslaved individuals of African or Native American ancestry or their children would not result in emancipation (Foote 2004:127; Goodfriend 1992:126).

The Anglican Society for the Propagation of the Gospel in Foreign Parts (SPG) made "the only significant effort to convert blacks to Christianity" in New York City by sponsoring Elias Neau's catechetical

school for Negroes between 1705 and 1723. Only a fraction of the city's enslaved laborers attended the school, which was opposed by a strong faction of Trinity Church (Goodfriend 1992:126–127, 130). Neau reported in 1712 that "the greatest part of the black people in New York remain unbaptised" (Goodfriend 1992:131). In 1691, England banned Roman Catholic priests from New York, a move that may have further alienated enslaved laborers who practiced elements of Catholicism brought from West Central Africa or New Spain. Foote (2004:147) suggests that the people of African descent most likely to embrace evangelical Protestantism were enslaved laborers born or raised in New York City during the mid-eighteenth century.

Aspects of mortuary practices at the New York African Burial Ground that could reflect Christianity include the use of coffins, the orientation of the body with the head to the west, use of headstones or headboards, and the absence of burial goods other than clothing and ornaments. East-west orientation with head to west was characteristic of Christian burial, so the dead would rise on the day of the resurrection facing east (Parler 1962; Puckett 1926; Rose and Santeford 1985a:40–41). Perry and Howson (2009) noted that the extended supine body position in the New York African Burial Ground is typical of European Christian burial. These customs appear to have been widespread in the diaspora.

Other mortuary practices associated with Christianity include the use of copper coins to cover the eyes. This practice is ancient, dating to Classical times, when it was considered as payment for the boatman Charon who ferried the deceased across the River Styx. It also served the practical purpose of keeping the eyes closed. Skeletons found in Jericho dating from the first and second centuries C.E. have been found with coins over the eyes. This custom continued to be practiced by African Americans into the twentieth century (Rose and Santeford 1985a:61). Copper coins were recovered from four burials at the New York African Burial Ground. Coins were placed over the eyes of Burials 135, an adult male, Burial 230, an adult female, and Burial 242, also an adult female.

African Belief Systems

African religions evolved and changed dramatically in the centuries before Europeans invaded their homelands. Butler (2000:26) has written that "African religions were as dynamic and shaped by human actions in different ways and different times as were European religions." Change took place prior to the arrival of missionaries, traders, and conquerors. Christianity, it seems, only further complicated a suite of beliefs and practices that had been evolving for centuries.

A major challenge in the study of religion in the African Diaspora is the assumption that Africa represents a kind of past to an American present. That is, African contexts were sources of past beliefs and practices from which diasporic beliefs and practices were in part derived. Matory (1999:74) has argued that many discussions of religion in African diasporic contexts often treat Africa historically as the "past" or the "base line" rather than a locus of contemporaneous, coeval developments in religious thought and practice. In this sense, African diasporic religions in the Americas are assessed in terms of their "purity" or as alleged survivals of a traditional African past. Embedded within this assumption is the characterization of African pasts as static and traditional and diasporic contexts as dynamic and transformative (see also Hall 2002; Mitchell 2005).

From this perspective, African religious ideology was fundamentally altered in response to new conditions in the Americas, and aspects of African diasporic religion in the Americas that are reminiscent of Africa are seen as "survivals." Although it is true that African beliefs and practices were adapted to conditions in diasporic contexts, it is possible that changes took place more in an additive than a reductive fashion. As Chireau (2003:41) has explained, "While Africans were unable to replicate their religious institutions, they usually created new, sometimes clandestine traditions that served their collective needs. Although they transformed the older religions, Africans maintained their ancient spiritual moorings while in America." A fundamental characteristic of many African religious ideologies is flexibility. Core beliefs and ways of perceiving the world may have been maintained even as aspects of African, Islam, and Christian religions were incorporated into a dynamic ensemble of beliefs and practices. Sweet (2003:112), for instance, considers Christianity not as a fundamental aspect of Kongolese identity, but rather as a veneer of additions to a central core of indigenous beliefs. In this sense, Sweet (2003:113) has suggested that Christianity was "naturalized" by the Kongolese to render it compatible with indigenous religious philosophy.

Numerous religions developed in the African diaspora. These included Candomblé, Umbanda, Xangô,

Batuque, Santería, Palo Mayombe, and Vodoun. Many African diaspora religions were hybridizations of African traditions that sometimes included elements of Christian European and Muslim religious practices to which Africans were exposed in Africa and in the Americas.

Repressive attitudes toward African religiosity were especially pronounced in the British colonies. Butler (2000:85) has stated that "no other Old World peoples suffered such wholesale destruction of their traditional religions as did Africans enslaved in Britain's North American colonies. Yet despite the odds against them, Africans reconstructed in America some key elements of their traditional religious practice and slowly reconfigured Christianity according to their own needs" (see also Chireau 2003:41).

According to Sweet (2003:113), the Kongolese drew parallels between Kongolese and Christian ideas by recognizing similarities between Nzambi Mpungu and the Christian god and between ancestral deities and Christian saints. The Kongolese may have adapted Christian symbolism to match the spirit and structure of Kongolese rather than replace a Kongolese core religious identity with a Christian one (Sweet 2003:113). The melding of Kongolese and Christian beliefs and practices resulted in new forms of religious practice, but ones that maintained an essential African basis. To Sweet (2003:114), "Christian faith was, at best, a parallel system of belief that served to complement Kongolese worldviews." Kongolese who practiced Christianity were in this sense "bi-religious" rather than Christians or Kongolese Christians (Sweet 2003:114). Fennell (2003:16) has suggested that Bakongo readily translated the Christian holy spirit, angels, and saints as spirits and Christian priests as ritual specialists similar to *banganga*. In a similar fashion, "the crucifix, statues of saints, Eucharist, and church buildings were viewed the same as minkisi and related ritual buildings" (Fennell 2003:16).

Many enslaved Africans in colonial New York City do not appear to have embraced Christian belief systems (Foote 2004:131). Goodfriend has stated that "funerals were the focal point of black religion in New York City. When blacks assembled to bury a member of their community, the opportunity existed for reinforcing traditional beliefs about death and the afterlife." Foote (2004) has pointed out that until the transatlantic slave trade ended in 1807, New York's African-descended population remained closer to African cultures than Euroamerican culture. "As long as native Africans continued to disembark at the port of New York, beliefs and practices of African derivation remained an available source of moral authority for the colonial port town's black population" (Foote 2004:142). According to Goodfriend (1992:122), this was especially the case for mortuary customs.

West Central African Core Beliefs

Many West Central Africans lived in a world densely populated by spirits. Ancestral spirits were of fundamental importance to West Central African belief systems, as was the interconnectedness of political, economic, and religious matters. The world of the living and the world of the dead were intimately connected as a single community, although "separated by a large body of water through which the dead had to pass in order to reach the other world" (Sweet 2003:104). The living and the dead had social and moral responsibilities to each other. Ancestor spirits protected the living from harm, upheld community standards and morality, witnessed disputes, and "insured bountiful harvests. In return, they expected to be loved and remembered. They required food at communal feasts, expected to be consulted in important family decisions, and demanded proper burials and frequent offerings at their graves" (Sweet 2003:104).

A widely held belief in Loango and other parts of West Central Africa was that the dead went to an afterlife where they continued to have an influence on the living. Also living in this other world were powerful spiritual beings, or deities, and "two categories of lesser spirits who were detached from individual families or territories, and who either activated charms that any one possessing the charms could use, or were dangerous angry spirits, ghosts whose malice or mischief could be troublesome" (Thornton 2001:75).

In Mbundu, deities were referred to as *kilundu;* "*kilundu* gave prohibitions, called *kixila*, for the people to follow, and punished them, often with sickness, if they did not follow them" (Thornton 2001:7). *Nzambi* were deities of the highest status. According to Sweet (2003:107), Nzambi Mpungu was considered a remote and inaccessible original ancestor to the Kongolese, but with the coming of Portuguese Christianity, Nzambi Mpungu came to be equated with the Christian God and was perceived by Kongolese Christians as involved in everyday affairs. Territorial deities, who often "lived in high places, watercourses, and uncultivated areas," were responsible for natural events, planting and harvesting schedules, and com-

munity morality (Thornton 2001:78). Territorial deities were either male or female and were often related as marriage partners. Priests, called *nganga Kiteke* in the Kimbundu speaking area or *kitomi* (or *kitebela* if female) in Kongo served territorial deities. "*Kitomi* traveled widely, carrying a staff of office, were not allowed to marry, or to die a natural death" (Thornton 2001:79). Territorial deities were worshiped at shrines kept in houses or other architectural spaces (Thornton 2001:76–78).

Sweet (2003:107) has warned that interpreting African religions through a Christian lens has resulted in the false impression that "lesser" spirits were agents of a supreme being when, in fact, no such hierarchical arrangement existed. As lineal offspring of common ancestors, there "was indeed a hierarchy of kinship and respect" (Sweet 2003:107); it was the most recently dead who took the most active role in the world of the living. According to Thornton (2001:74), some Mbundu in the 1650s may have believed that the souls of the dead passed on to relatives. The soul of a dead husband transmigrated to his wife or favorite wife, or barring that, passed on to his child. Others apparently believed that "the soul perished along with the body" (Thornton 2001:74). In Loango, some people believed in reincarnation, that "the soul of a dead person was reborn in the same family," whereas others did not believe in an afterlife (Thornton 2001:74). Families attended to the ancestors. Families in Loango had small house altars where they left food and drink. Ceremonies involving sacrifice were also held to propitiate the dead. Descendants who failed to offer ancestors enough were visited with sickness, death, or bad luck; those who attended the ancestors well were rewarded with good luck and good health (Thornton 2001:79). In Christian Kongo, people visited the graves of the dead to ask for good luck in war and other affairs. Cemeteries were "located in deep woods or away from inhabited areas so that the soul could have 'maximum rest,' and would lay quietly in the grave and not bother the living" (Thornton 2001:80). *Zizumina* were "spirits of those killed in war or eaten by animals and improperly buried. These wicked and bothersome spirits molested the living" (Thornton 2001:81). As the New York African Burial Ground history reseachers note,

> We may never know the extent to which these beliefs and practices transferred to and were reshaped in the New Amsterdam environment. It is reasonable to assume, however, that West Central Africans (like all people) held to their traditions to the degree that their bondage and circumstances permitted. Removal from their homelands and enslavement in New Amsterdam would have challenged their ability to define themselves on their own cultural terms but would not have erased influences long embedded in their collective consciousness [Medford, Brown, Heywood, et al. 2009b:18].

Divination and Healing

The religious experience of West Central Africans was in many ways practical and efficacious. Most West Central Africans "viewed their religions as a way of explaining, predicting, and controlling events in the world around them" rather than as a vehicle for communing with or supplicating to a supreme being (Sweet 2003:108). West Central Africans conceived of the self as consisting of an outer being, or shell, and an essential inner being, or soul. The inner being could act independently of the outer being and leave the body to pursue other matters while the outer body slept. Maintaining a whole or complete soul required the protection of ancestral spirits. Health was a sign of spiritual power and well-being, whereas illness indicated failure to fulfill social obligations to ancestral spirits. The soul could also be weakened by the activities of evil spirits and witches who attempted to prolong the separation of the soul from its outer shell, so that they could eat the soul and deplete its power (Sweet 2003:105).

To many West Central Africans, no form of illness was considered "natural" (Sweet 2003:145). West Central African religions were based on dialogues among the living and the dead and on factors that were familiar and known, rather than the hidden, inaccessible mysteries more familiar to Christian belief. As intermediaries, ritual healers or diviners identified important past or future situations and spirits or witches that for various reasons plagued the body. Remedies prescribed to treat illness included the concoctions of medicinal herbs, feasts to appease ancestors, and trials of suspected witches. Healers were sometimes chosen by particular spirits "to cure specific diseases or illnesses or to protect from malevolent forces" (Sweet 2003:105). In Brazil, divination was used by both enslavers and enslaved Africans to identify individuals guilty of offenses such as escape, witchcraft, or theft. In this way, "African divination

operated to achieve balance and harmony in the slave community, from the perspective of both slaves and the master" (Sweet 2003:121).

Spirit possession was an especially powerful and animated form of divination. During spirit possession, a spirit entered the vessel of a medium's body through which it spoke and acted and could be queried. For Angolans, other forms of possession involved possession by ancestor spirits (*quilondo*), "usually as punishment for a lack of proper veneration and respect" (Sweet 2003:144). This kind of possession, referred to as *calando* in Brazil, could cause illness or death in those who were possessed.

Sweet (2003:128–129) has pointed out that although divination involving communication with ancestral spirits was common among West Central Africans and West Africans, the specific symbols and rituals performed "differed in accordance with very specific historical and cultural resonances." A diversity of material traces related to divination rituals could be expected, although many of these ultimately may have had similar goals or meanings. West Central Africans apparently placed heavy emphasis on divining and treating the cause of illness through spirit possession, whereas enslaved Africans from Mina placed greater emphasis on "other rituals, divination, and herbal cures to heal the ill" (Sweet 2003:156). An emphasis on using material objects in divination ritual may make some West African ritual behaviors more visible than West Central African ritual behaviors in the archaeological record, although hybridized forms that combined practices from multiple regions also developed (Sweet 2003:158).

Common artifacts used in West African forms of divination include "a large basket, which might contain powders, shells, bones, hair, teeth, feathers, and other powerful substances from the natural world, all of which might be endowed with spiritual power" (Sweet 2003:156). Divination rituals involving a pan filled with water were common among enslaved Africans imported from the Bight of Benin. The water symbolized the water body through which spirits passed when moving between the world of the living and the world of the dead (Sweet 2003:129). Ewe, Fon, and Yoruba from West Africa often used snakes in divination rituals, as snakes were believed to provide fortune or misfortune. Other forms of divination, such as *jaji*, during which suspects are directed to remove an object from boiling water, appear to have been common across ethnic groups. In this ritual, the person who is burned is considered guilty.

Despite differences in specific divination rituals, different groups shared broad similarities in the purposes of divination; namely, "the restoration of temporal balance through spiritual intervention" (Sweet 2003:132). Sweet (2003:131) has contended that some divination rituals and beliefs held in common among diasporic groups may have been instrumental in the formation of diasporic group identities and processes of creolization. Many divination rituals were performed during the night after long workdays and "were always viewed with suspicion and trepidation by the master class" (Sweet 2003:133).

Discussion

Enslaved Africans brought rich and diverse religious beliefs and practices with them to the Americas, many of which may have been expressed at the African Burial Ground. The growing literature on religious beliefs and practices of African-descended individuals in the Americas is beginning to reveal a deep and complex history of dynamic interactions and culture change. Groups living in West Africa, particularly in the Senegambia region, were exposed to Islam centuries before the arrival of Christian Europeans. The widespread mobility of Muslims facilitated the mobilization of people, artifacts, and ideas between West Africa and other parts of the Islamic world. Interactions among practitioners of Muslim and traditional African faiths resulted in the development of parallel traditions and the exchange of religious ideas and rituals. Forms of divination practiced by the Yoruba, Igbo, Nupe, Fon, and Ewe, for instance, reflect the interaction and mutual development of Islamic and traditional African ritual practices. Some enslaved Africans forcibly migrated to the Americas were professed Muslims; others carried with them traditions that reflect a long period of interaction among Muslim and non-Muslim worldviews.

Beginning in the fifteenth century, the arrival of Christian Europeans on the Atlantic coast of Africa exposed Africans to Christian religious beliefs and practices and spurred the development of new religious forms, such as Kongolese Christianity. In West Central Africa, many Kongolese came to identify themselves as Christians and to incorporate aspects of Christian religion into their own worldviews. Thornton (2001) has suggested that the Kongolese practiced their own local form of Christianity, which some Christian Europeans characterized as not fully Christian. Sweet (2003) has argued that the core of

Kongolese religious identity was never Christian. Instead, Christian practices were parallel traditions enacted alongside traditional African ones. According to this view, the Kongolese "indigenized" or "inculturated" Christianity to suit Kongolese worldviews and religious needs. Kongolese accepted Christian saints and seraphim as the ancestral spirits of their own cosmologies and embraced Christian priests and ritual paraphernalia as performing functions similar to their own *banganga* and *minkisi*, respectively.

The processes by which Africans incorporated elements of Islam or Christianity into their religious lives appear to have been ones of supplementation and augmentation, rather than replacement. Although some individuals certainly identified themselves as Muslim or Christian, core beliefs and the fundamental structure of traditional African worldviews could have remained largely intact. Complete adoption of European Christian or North African Islamic belief systems may have only occurred among individuals indoctrinated at a young age. Owing to the continuous influx of African adults, many traditional African beliefs may have been continuously imported and rejuvenated in colonial contexts, albeit from different sources and according to changing conditions.

Traditional African religions are often considered flexible and nondogmatic; they are capable of accommodating and incorporating elements of multiple religious traditions. Thus, it should be expected that some aspects of Christian or Islamic mortuary practice would be expressed in the burials of enslaved Africans who maintained fundamentally non-Christian or non-Islamic worldviews, or a mixture of worldviews that resonated with multiple religious traditions.

Islamic mortuary practices were not clearly in evidence at the New York African Burial Ground. It still remains possible that some individuals buried in the New York African Burial Ground who were buried without jewelry, ornaments, or coffins and wrapped in winding sheets were Muslim. It is also possible that some individuals practiced a mixture of Islamic and other faiths or that Muslims were buried in other areas of the burial ground. The coffinless burials in the New York African Burial Ground sample tended to be buried with personal items and according to body positions and orientations that go against Muslim practice; multiple attributes of their burials, including the lack of coffins, appear to relate to factors other than religious background. Many of those interred without coffins were inferred to have been African refugees or Africans employed by British forces who died as a result of the Revolutionary War. These individuals may have lacked the local social network needed to mobilize the resources for a proper burial. Perry, Howson, and Holl (2009d:204) hypothesize that the impetus behind "coffinless burial was not a lack of means, but a lack of people to see to these individuals' funeral arrangements."

By contrast, some of the basic attributes of many of the burials—supine, extended burial in coffins with head-to-the-west orientations—are shared among European Christian burial practices as well as some contemporary African burial practices (Gittings 1984; Handler and Lange 1978; Perry and Howson 2009:115; Riordan 1997). As has been discussed, the performance of Christian-affiliated practices among enslaved Africans need not suggest the replacement of traditional African values with European Christian ones. Indeed, among Africans who identified themselves as Christians, aspects of Christian religion appear to have supplemented traditional African practices. Christian forms were given African meaning or significance. The appearance of mortuary practices held in common among some Africans and European Christians thus does not necessarily imply the expression of Christian or fully Christianized identities, nor does it imply the loss of African-derived religious identities. Rather, the use of practices common to Christian burials implies that these elements were actively incorporated into New York African mortuary practices.

The uniformity of burial practices at the New York African Burial Ground implies to Perry, Howson, and Bianco (2009:371) that a community identity began to develop early in the eighteenth century among African-descended people living in New York, despite the diversity of religious and ethnic backgrounds. The researchers also point out, however, that the sample is probably not representative of the entire burial ground and could be biased toward individuals with a common background (Howson and Bianchi 2009a). If this is the case, practices identified in the excavated burials may more closely reflect practices of one or more segments of the community, rather than represent the entire community The possibility that sextons or grave diggers influenced some burial practices also remains, although no information confirming official involvement in burials prior to the late-eighteenth century has come to light (Howson, Bianco, et al. 2009:63). A possible explanation for the remarkable homogeneity in burial practices may relate to the provision of coffins by slaveholders, the

impoverishment of the deceased, and the influence of sextons and grave diggers.

Historical information on African diasporic religious beliefs and practices encourages archaeologists to consider death not an event, but a process. Discrete ceremonies surrounded the burial of an individual, but in many cases, the dead were also memorialized at one or more points after the original burial. Moreover, some African worldviews tend to conceptualize the world of the living and the world of the dead as intricately interconnected. Through the efforts of religious specialists, the performance of divination and healing practices, offerings, and the manipulation or deposition of spiritually endowed objects, the living regularly interacted with the dead. The dead were not forever removed to a distant heaven but continued to play a role in the world of the living by providing information, moral authority, and protection or affecting the fortune of the living. The dead could also bring harm upon the living as a result of failures to fulfill social obligations, witchcraft, or the actions of aggrieved individuals.

The Impact of Field Methods on the Interpretation of Mortuary Practice

This brings the discussion to one aspect of the research that was sorely overlooked in the initial fieldwork and that could have provided an important source of information had a research design emphasizing African Diaspora studies been developed prior to excavation—the targeting of contexts where ritual deposits associated with spirit management, memorialization, and ancestor veneration were likely to have occurred. The limited information available about religious practices in West and West Central Africa and in the diaspora suggest that ritual deposits were to be expected at the surface of graves, as well as various locations within graves, including on coffin lids. Although the specific meanings of these deposits are not easy to interpret and could have varied among people of different backgrounds, they were fundamentally African expressions of spiritual philosophy that appear to have found new life in diasporic contexts. The inclusion of some grave goods with individuals provides a small glimpse into practices that likely had diverse African roots, but the full complement of significant practices that may have resulted in ritual deposits at the New York African Burial Ground were obscured by the way data were recorded.

For the most part, because the main focus of the investigations was the burial itself and not the associated ground surface or specific proveniences within or above the grave shaft, it was not possible to isolate materials as definitively related to mortuary practices unless they were directly associated with the coffin or human remains. The appropriate level of care in feature discovery or detail in data development was not met, and important information was irretrievably lost. This is perhaps one of the greatest frustrations for archaeologists, who can only assume that a rich reservoir of potential information was obliterated in haste and ignorance. Future investigations should strive to ensure that the opportunity to obtain such information is not lost should excavations of the remains of diasporic Africans again take place.

Conclusions

The African Burial Ground was sacred space for thousands of people of African descent who lived and died in New York during the eighteenth century and possibly earlier. Individuals of African descent may not have elected originally to bury their dead in the African Burial Ground; the location of the burial ground was essentially chosen for African-descended individuals as a result of the prejudicial proscriptions of European New Yorkers (Medford, ed. 2009). As the African Burial Ground came to be used, however, it became a place of central importance to many African-descended individuals. As Blakey (2009a:6) states, "the cemetery may have been especially important as an institution for the affirmation of African and African American humanity under the material conditions of slavery and in the pervasive presence of the psychological affront to black humanity required to morally justify those conditions." It was the place where kin were buried, a place to memorialize and interact with the ancestors, a place to develop and strengthen neo-African identities, and a place to foment resistance. In essence, it was sacred space that was in many ways African to the core. Despite (or perhaps because of) its importance to people of African descent, the African Burial Ground was repeatedly desecrated by historical-period waste disposal and other regrettable activities.

In the late-eighteenth and early-nineteenth centuries, as the land around the Collect Pond was filled in and residential and commercial facilities were developed on the site, the African Burial Ground became

sacred space buried and obscured by tons of debris and overprinted with countless secular activities. This was a site of monumental proportions that was disturbingly disregarded. Remarkably, substantial portions of the site were never destroyed. Amidst intense public outcry, portions of the African Burial Ground were discovered to have remained largely intact when the site was excavated. The disturbance of more than 400 burials by excavation was seen by many members of the descendant community as further desecration of sacred space and a very real recapitulation of the prejudice and racism of times past. Since its rediscovery, appreciation of the African Burial Ground as sacred space has been renewed among members of the descendant community, who fight to preserve the burial ground and protect it from further desecration. Investigation of the site has awakened understanding of the spirituality of Africans in the Americas and raised questions about how diverse ideologies and cosmologies related to mortuary practices among people of African descent in New York. Perry, Howson, and Bianco (2009:373–374), for instance, question how the mortuary practices performed at the African Burial Ground influenced later practices among descendants and suggest that understandings of mortuary practices at the African Burial Ground could be used to understand practices that followed:

> How was the "proper" burial of the seventeenth/eighteenth century reconfigured in the liturgies and in the burial yards and vaults of the city's nineteenth-century black churches? Were the accoutrements, logistics, and divisions of labor that comprised a "proper" burial altered during periods of heightened social suffering, such as the yellow fever or cholera years? Using the African Burial Ground as a baseline might offer a more sophisticated grasp of how a rite of passage is remade when the organizing structures in the world around it have changed.

Investigation of the site has also revealed how little is known about the mortuary practices of seventeenth- and eighteenth-century Africans in the diaspora or the relationship of mortuary practices to the diverse and dynamic belief systems of which they formed a part. Given variation through time in the origins and backgrounds of Africans forcibly migrated to places like New York City and variation in local and regional histories of enslavement and forced migration, it should be expected that mortuary practices at different times and places in the diaspora should be regionally variable and historically contingent. Some aspects of mortuary practices at various times in Brazil, for instance, may have been very different from those in New York. Other aspects of mortuary practices could have been broadly similar across many different contexts of the African Diaspora owing to broadly similar conditions or cultural backgrounds. Sufficient information is not available at this point to document or evaluate the potential variability in mortuary practices among Africans in the diaspora, let alone to assess fully their meaning or significance. Yet, a richness of content and meaning that is largely untapped seems to be present in these materials. To achieve a more complete understanding of the life and death of diasporic Africans in New York and other British colonies, much more work needs to be done in ethnohistory, ethnography, and archaeology. Yet, if that work is to be done, archaeologists need to ensure that the appropriate information is developed. Future studies of African Diaspora burial grounds and sacred sites should incorporate what is known about how Africans in the diaspora interacted with the dead to target contexts that are likely to contain material evidence for mortuary behavior. Otherwise, crucial information is lost, and the opportunity to understand aspects of our shared past is unknowingly discarded.

Chapter 9

Significance of the African Burial Ground

The African Burial Ground is the deeply sacred site of burial and commemoration of thousands of African ancestors during the seventeenth and eighteenth centuries. With the rediscovery of the Burial Ground in the late twentieth century, the sacred nature of the site was recognized through the descendant community's involvement and dedication in seeking proper respect and dignity for the ancestors buried there. Since the rediscovery, multiple ceremonies and vigils celebrating and venerating the ancestors have been held at the African Burial Ground, Howard University, and other locations. The GSA sponsored ceremonies commemorating the transfer of the human remains to Howard University in 1993, reinterment of the remains at the New York African Burial Ground in 2003, and the dedication of the memorial in 2007. The sacred nature of the site has also been emphasized by the Project's Office of Public Education and Interpretation (OPEI) through education materials and exhibits at the interpretive center, and by the researchers in the three technical volumes that are part of this series.

In addition to its spiritual significance, the African Burial Ground also represents an important reservoir of information on world history and the African Diaspora. The people buried there lived and died during a tumultuous and pivotal period in world history, when colonial encounters between Europeans, Africans, and Native Americans took place on local, international, and transatlantic scales. Processes and events that occurred during this period form the foundation of modern life. The history of Atlantic slavery and the emergence of race concepts and racial relations in the Americas are issues central to a more complete understanding of the modern world.

Given its significance to our national and international heritages, the African Burial Ground was designated a New York City Landmark and a National Historic Landmark in 1993, and in 2006 the portion of the burial ground that was excavated was designated a National Monument. Interdisciplinary studies in the history, biology, and archaeology of sites like the New York African Burial Ground are key to developing a greater understanding of many issues in anthropology and history. New York African Burial Ground research is important to African Diaspora studies, bioarchaeology, colonial studies, historical archaeology, urban archaeology, African Diaspora archaeology, Cultural Resource Management (CRM), and to the discipline of archaeology as a whole.

Data generated from excavations at the New York African Burial Ground are a testament to human cruelty on the one hand and to human dignity on the other. The individuals buried in the African Burial Ground suffered harsh living conditions, poor diets, environmental hazards, and brutal punishments. At the same time, the individuals lived independent lives and were buried with dignity by people with similar backgrounds and affiliations, including loved ones (Perry, Howson, and Bianco, eds. 2009a). As Blakey (2009a:5) cogently observes, in the face of racialist attempts to objectify and dehumanize people of African descent, the dignified and careful burial of individuals at the African Burial Ground represents a potent assertion of humanity. Through the dignified and careful burial of the deceased, Africans and African Americans resisted dehumanization and the legitimization of slavery and racism.

For history and archaeology, the research recovers evidence of people whose struggles and accomplishments had been neglected and undervalued by previous histories and racial ideologies. Rarely acknowledged until this discovery, the forced labor of individuals buried in the African Burial Ground literally built and maintained New York, one of the largest and most influential cities in the Western Hemisphere (Medford, ed. 2009). New York African Burial Ground research

elucidates and clarifies the origins, identities, daily lives, and struggles of Africans and African Americans in a northern colony.

This chapter explores some of the ways in which the New York African Burial Ground has and will continue to influence the discipline. First, some of the key findings of the research are summarized. The New York African Burial Ground Project is then contextualized in terms of current research, with an emphasis on how New York African Burial Ground research is exemplary and what it contributes to archaeological knowledge and praxis. In particular, the New York African Burial Ground research is discussed in terms of themes important to (1) African Diaspora studies, (2) archaeology as a whole, (3) historical archaeology, (4) African Diaspora archaeology, and (5) CRM. The chapter concludes with a discussion of the significance of the site in terms of its interpretation and inscription on local, national, and international lists of significant heritage sites and landmarks.

Research Directions

As previously stated, the lack of an adequate research design was a major point of contention early on in the project. An adequate research design was not produced during the initial stages of fieldwork in part because archaeologists had little time to prepare one but also because research expertise in the African Diaspora was notably lacking among members of the original project team. The research design that was required by the amended MOA and eventually approved by the GSA was developed by a team of physical anthropologists, archaeologists, and historians assembled by Michael Blakey (Howard University and John Milner Associates 1993). The approved research design endeavored to "establish the full scientific and historical significance of the site" by bringing to the project diverse expertise and a richly informed African Diaspora perspective that relied heavily on African American intellectual traditions, including critical theory and vindicationist approaches to history (Blakey 2009a:12). As Blakey (2009a:13) observes, the research design

> proposed the most comprehensive interdisciplinary study then attempted, with studies that ranged from molecular genetics to African art history. Included on the team were specialists in the archaeology and history of relevant African, Caribbean, and North American diasporic populations, all leading scholars and their most energetic students. The full range of the latest techniques for skeletal recordation and assessment would be used; as a guide, we used a manuscript of *Standards for Data Collection from Human Skeletal Remains* (Buikstra and Ubelaker 1994), then in final preparation. The problems presented for research included: the cultural origins, the physical quality of life, the transformations, and the resistance to slavery that could be gleaned from the data.

Comments received on the research design revealed that the research team's colleagues were strongly divided regarding the proposed approach, with some strongly in favor and others strongly opposed. Some reviewers commented that they felt the project team's approach was ethnocentric in its political content and in its overt attention to African American perspectives. According to Blakey, he was instructed by the GSA to remove any political or ethnocentric overtones in the research design on the grounds that such statements could be construed as discriminatory. However, "no changes would be made because no discriminatory content existed. The passages [considered ethnocentric or discriminatory] were simply definitive of the concerns and critical perspective of African Diaspora scholarship. It seemed that to affirm the vindicationist or corrective value of the site made our work more meaningful to some and more threatening to others" (Blakey 2009a:14).

Blakey (2009a:13) suggests that objecting to using African American intellectual traditions to interpret the New York African Burial Ground is like objecting to French structuralism or British social anthropology on the grounds that these schools of thought are ethnocentric. Vindicationist or correctionist scholarship is distinct from what has been termed Afrocentric scholarship (Blakey 1995). Its aim is not to replace Eurocentric bias with Afrocentric bias but instead to expose and correct the biases and distortions of dominant or racializing perspectives. Blakey (2009a:13) characterizes the researchers' theoretical approach as adding to the interpretation of the New York African Burial Ground site rather than excluding or displacing other traditions. To Blakey (2009a:13), because the intense involvement of northern colonies in slavery is largely absent from public consciousness, the very presence and size of the African Burial Ground supports the vindicationist argument that current Eurocentric versions of national and world history are distorted and inaccurate.

The current report is organized around the main themes identified in the research design: origins, identity, transformations, and resistance (see Chapter 1). Chapters 4–8 provide a full accounting of how the researchers' approaches and findings addressed the major themes. Nonetheless, a brief recounting of key findings is warranted.

Key Findings of the Research

A major focus of the research was to discover where African New Yorkers came from in Africa and which macroethnic groups they were affiliated with prior to being forcibly migrated to New York (Howard University and John Milner Associates 1993). Historical research revealed that the origins of African New Yorkers were diverse; New York Africans came from many different societies in West and West Central Africa, as well as from Southeast Africa. Documented voyages of ships returning to New York directly from Africa suggest a predominance of Senegambians, with smaller numbers from Southeast Africa, the Gold Coast, or West Central Africa. Many African New Yorkers were initially enslaved in the Caribbean before they were shipped to New York, however. As a result, the ethnic affiliation of many African New Yorkers reflected the ethnic composition of the Caribbean colonies from which they were shipped. For instance, between 1658 and 1713, Africans from the Gold Coast, Bight of Benin, and Niger Delta were common in Barbados and Jamaica. Hence, African New Yorkers originally migrated to Barbados and Jamaica before being shipped to New York may have been from the same areas of West Africa. Historical research also revealed that ethnic backgrounds and characteristic ages and sexes of individuals forcibly migrated to New York changed over time while the burial ground was in use. This resulted in a changing tapestry of ethnic affinities over time as well as variation in the demographic composition of the New York African community (Heywood and Thornton 2009b; Medford, Brown, Carrington, et al. 2009a; Medford, Carrington, et al. 2009).

A major focus of the research involved investigating whether New York African Burial Ground individuals could be linked with specific macroethnic groups in Africa through biohistorical research. Morphological studies of crania and teeth consistently suggested African descent for the individuals that were examined, but a lack of appropriate reference samples made it difficult to discern from which groups people were descended. Genetic studies demonstrated an incredible degree of genetic diversity in a small sample of individuals, a finding that underscores the genetic diversity of both African peoples in general and of African New Yorkers in particular. Like the morphological studies, genetic studies were hampered by an inadequate database of reference samples, resulting in efforts to develop a more relevant and comprehensive database (Jackson et al. 2009). Trace element and isotope studies showed which of a sample of individuals had likely migrated during life and were used to conclude whether an individual may have been born in New York, Africa, or a third location. These studies generally confirmed that most individuals with modified teeth were likely born in West or West Central Africa, but the clustering of some individuals with modified teeth with young individuals thought to have been born locally suggests that a few individuals with modified teeth could have grown up in another part of Africa or somewhere in the Americas. This finding led the researchers to hypothesize that the cultural modification of teeth could have persisted among enslaved Africans in the Americas (Goodman et al. 2009). Altogether, studies of origins have made important advances in understanding the cultural and biological backgrounds of the people buried but also revealed the need for much future work (Blakey, Rankin-Hill, Goodman, et al. 2009).

Tied into the question of origins is the question of identity. The research design addressed the issue of identity in terms of how African identities were transformed in the context of New York enslavement (Howard University and John Milner Associates 1993; Howson, Bianchi, and Perry 2009; Perry, Howson, and Bianco 2009). Previous models of culture change have suggested that Africans in northern colonies were quickly acculturated through processes of enslavement and lost their distinctive African cultural heritages (Blakey 2009b). More recent historical and anthropological research has suggested that Africans retained essential aspects of their African heritages and that Africans throughout the Americas routinely organized themselves according to diasporic, African-derived identities, sometimes referred to as "nations." Africans from different parts of West, West Central, and Southeast Africa were continually arriving in New York, which suggests that ties to African heritages for the African American community in Manhattan were continually rejuvenated throughout the period the

African Burial Ground was in use. This process would have resulted in the maintenance of African cultural continuities in Manhattan, rather than in the loss of African-derived identities, spiritual perspectives, and cultural expressions (Medford, Brown, Carrington, et al. 2009a, 2009e).

The diverse origins of African New Yorkers were complemented by exposure to diverse lifeways and belief systems. Many African New Yorkers, even prior to arriving in Manhattan, had been exposed to Islam, Christianity, and African religious traditions. African New Yorkers also came from societies with diverse subsistence systems and political economies. Before their enslavement, African New Yorkers had lived in communities that depended on fishing, agriculture, pastoralism, and specialized crafts and industries for their survival. African New Yorkers brought their distinct heritages to Manhattan, where they expressed a variety of personal, ethnic, and religious identities that derived from African heritages and were influenced by the interaction of Africans, Native Americans, and Euroamericans in diasporic contexts. New York Africans had familial, occupational, and organizational identities that were both influenced by their own personal backgrounds and affected by enslavement. In colonial New York, Africans assumed many different identities: some that honored and extended their African heritages, some that were developed anew in order to carve out a new existence in New York, and others, such as racial and enslaved statuses and occupation, that were forced upon them (Heywood and Thornton 2009a; Howson, Bianco, et al. 2009; Medford, Brown, Carrington, et al. 2009a, 2009c, 2009d, 2009e; Medford, Brown, Heywood, et al. 2009a).

Very few graves contained personal items or other characteristics that could be used to infer the origins and identity characteristics of the deceased. The researchers concluded that the lack of personal items indicates the poverty of the deceased. Some graves contained items—such as a tobacco pipe, shell, crystal, a mica disk, coral, a ceramic ball, strands of beads, and other items—that are suggestive of African cultural backgrounds and spiritual practices. In a few cases, evidence for possible conjuring bundles or amulets implied the spiritual roles an individual may have fulfilled in life and could be connected to traditions of spirit communication and intervention practiced by Africans in the diaspora. One particularly remarkable link to an African heritage was the discovery of a possible Sankofa symbol on the lid of a man's coffin in Burial 101. Another was the tobacco pipe and strand of waist beads buried with the woman in Burial 340. Both individuals had culturally modified teeth, although the woman in Burial 340 was likely born in West or West Central Africa, whereas the man in Burial 101 may have been born in the Americas. Together, these artifactual clues to African heritages suggest that aspects of African spiritual practices and beliefs were cherished and renewed among African New Yorkers (Bianco et al. 2009; Perry, Howson, and Bianco 2009; Perry and Woodruff 2009).

Along with diverse origins and expressions of identity came a certain level of solidarity among African New Yorkers. Given diverse origins and the long period during which the African Burial Ground was used, the researchers were surprised to find that the vast majority of burials in the New York African Burial Ground were quite similar in their archaeological characteristics. Most individuals were buried individually in coffins, in supine position, shrouded or in street clothes, with the head to the west. The homogeneity in mortuary treatment at the New York African Burial Ground suggested to the researchers that an overarching African American community identity had developed early on in the use of the burial ground. A strong community identity may have been necessary for New York Africans to aid each other in their mutual survival and to assert and maintain their human dignity (Howson 2009; Perry and Howson 2009; Perry, Howson, and Holl 2009a, 2009b, 2009c, 2009d; Perry, Howson, and Bianco 2009).

The conditions of daily life for African New Yorkers, including the conditions of their lives in Africa and the Caribbean prior to arriving in New York, were of major concern to the researchers (Howard University and John Milner Associates 1993). The researchers thus investigated evidence for diet, work, disease, health, family formation, and mortality among the individuals buried in the New York African Burial Ground. Historical information indicated that the diet for enslaved Africans was poor, much of it based in meager portions of cornmeal mush, supplemented only minimally by dairy, fruits, vegetables, meat, and seafood. In both the Caribbean and in Manhattan, enslaved Africans supplemented their diets through their own efforts by tending gardens, hunting, fishing, theft, and exchange in underground markets (Medford, Brown, Carrington, et al. 2009b, 2009c; Medford, Brown, Heywood, et al. 2009b; Medford, Carrington, et al. 2009). Bioarchaeological studies showed that many New York African Burial Ground individuals likely suffered

from nutritional deficiencies, and this was particularly the case among individuals likely to have been born enslaved. The high incidence of porotic hyperostosis and cribra orbitalia, for instance, probably reflects a lack of adequate nutrition among the enslaved (Null et al. 2009). Poor dental health, including abscesses and frequent caries formation, would have made eating difficult and could have contributed to poor nutrition or other health risks, such as infection (Mack et al. 2009). One particularly striking finding was that some individuals had especially high levels of lead in their teeth. Individuals with highest concentrations of lead appear to have spent an extended portion of their lives in New York, whereas individuals who had arrived in New York shortly before their deaths had low levels of lead in their teeth. To the researchers, this pattern suggested that lead poisoning had occurred locally. The source of the lead is currently unknown, but toxic levels of lead in the environment could have contributed to diverse health problems, including developmental and nutritional problems. Lead poisoning, excessive work, infection, and poor nutrition probably contributed to delayed growth and development among African New Yorkers (Blakey 2009b; Blakey, Rankin-Hill, Goodman, et al. 2009; Goode-Null et al. 2009; Goodman et al. 2009).

On Caribbean plantations, work centered around planting, tending, and harvesting crops, and around processing cane to produce sugar and rum. Work in urban Manhattan was more diverse, particularly during the eighteenth century, and spanned a wide range of occupations, including agricultural labor, maritime work on ships or on the docks, domestic work in New York households, and skilled labor in New York merchant shops. Early on in the history of the settlement, Africans labored to build, protect, and ultimately feed New Amsterdam. Later, as the settlement grew into a bustling commercial center and port city during the late-seventeenth and eighteenth centuries, many Africans worked in the shipping industry and in diverse trades (Medford, Brown, Carrington, et al. 2009c; Medford, Brown, Heywood, et al. 2009a, 2009b). Bioarchaeological investigation of musculoskeletal markers, osteoarthritis, osteophytosis, and other potential indicators of work suggested that many individuals from the New York African Burial Ground had suffered hard labor. The researchers found evidence for frequent heavy lifting and repeated performance of manual tasks such as sewing. The researchers suggest that common activities included working from a squatting position, walking over uneven surfaces, and climbing stairs and ladders. One surprising finding was that the ankle among both men and women was frequently affected by osteoarthritis, which is highly unusual for populations studied bioarchaeologically. Men and women exhibited somewhat different patterns in indicators of work, which seemed to reflect a tendency for women to be involved in domestic tasks such as sewing, washing, and manipulating heavy objects, such as iron pots or water buckets, and men to be involved in a variety of other tasks that required different forms of hard labor and heavy lifting. In contrast to indicators of work on southern plantations, which tend to be fairly consistent among individuals due to similarity in work regime, indicators of work in the New York African Burial Ground sample were somewhat diverse among individuals, perhaps owing to the diverse tasks performed by New York Africans (Blakey, Rankin-Hill, Goodman, et al. 2009; Wilczak et al. 2009).

Disease was rampant in the places where enslaved African New Yorkers lived and worked. Cities like New York were crowded and unsanitary, resulting in the spread among the population of infectious diseases, such as diphtheria, influenza, measles, smallpox, and yellow fever. The researchers found that disease epidemics occurred repeatedly throughout the period the burial ground was in use. Enslaved African New Yorkers lived in damp, dark attics, cellars, and kitchens and were often poorly clothed. Hard labor weakened their bodies as did the poor diets on which they depended. Unsanitary conditions and chronic physical stress would certainly have encouraged infection and the spread of disease among enslaved African New Yorkers (Medford, Brown, Carrington, et al. 2009b). Bioarchaeological evidence for infection was seen in the bones of many individuals, with active lesions occurring most often among the young, suggesting that infectious disease for the young in particular may have led to their early deaths. It was not possible in most cases to discern the specific etiology of indicators of infection, but evidence for congenital syphilis or yaws was observed in around one of every six individuals who were observable for treponemal infections. Interestingly, evidence for venereal syphilis was slim, a finding that stands in stark contrast to studies in the Caribbean, where venereal syphilis appears to have been widespread among enslaved populations (Blakey 2009b; Blakey, Rankin-Hill, Goodman, et al. 2009; Null et al. 2009).

Bioarchaeological and historical evidence suggests that the health of African New Yorkers was seriously

compromised by enslavement and racial oppression. Especially stressful periods during childhood were reflected in the occurrence of hypoplasias in the teeth of New York African Burial Ground individuals. Hypoplasias, like indicators of active infection, seemed to be most prevalent among younger individuals, suggesting that people who were most affected were those enslaved at a young age. To the researchers, the timing of their occurrence seems to have coincided with the (1) the initiation of children into hard labor around the ages of 4 or 5, (2) stressful conditions leading up to the capture and enslavement of children in Africa, or (3) stress associated with the Middle Passage (Blakey, Mack, Barrett, et al. 2009; Blakey, Rankin-Hill, Goodman, et al. 2009).

The accumulated stresses of enslavement led to the early deaths of many African New Yorkers. Compared to Trinity Church records, African adults appear to have died at younger ages than New York European adults. Large numbers of infants and children also died, a pattern that appears to have been fairly similar to the pattern seen in the New York European population. Overall, the mean age-at-death for African adults was around 37 years for New York African Burial Ground adults, which was lower than most compared samples. Life expectancy appeared artificially high for younger New York Africans, but this pattern was likely an artifact of the forcible migration of Africans to New York as adults, some of whom may have died within a few days or years of their arrival, whereas many enslaved children born in New York may not have survived to adulthood. Mortality data suggest overall that enslaved African New Yorkers died young, whether they were infants or children born in New York or recently migrated African-born adults (Blakey, Rankin-Hill, Goodman, et al. 2009; Blakey, Rankin-Hill, Howson, et al. 2009; Rankin-Hill et al. 2009).

The researchers found that opportunities for procreation and child care were severely limited by the conditions of enslavement in Manhattan. Examination of sex ratios and child-to-female ratios indicates that, although there were substantial numbers of New York African adult females throughout the eighteenth century in comparison to African adult males, reproduction and child survivorship probably did not occur at rates high enough to contribute to growth in the New York African population. Instead, the New York African population appears to have grown mostly as a result of in-migration, rather than reproduction (Blakey, Rankin-Hill, Goodman, et al. 2009; Blakey, Rankin-Hill, Howson, et al. 2009; Rankin-Hill et al. 2009).

Many New York enslavers regarded childbearing and childcare as impediments to economic gain and thus tried to prevent procreation and family formation among enslaved Africans. Nonetheless, African New Yorkers still managed to forge families, which was reflected to some degree in the patterning of graves and offerings found in the burial ground. The formation of families and intergenerational ties are also evident in the community of African landowners that emerged around the Collect Pond in the mid-seventeenth century and in records of baptism, marriages, manumissions, and wills (Howson, Bianco, et al. 2009; Medford, Brown, and Carrington 2009; Medford, Brown, Carrington, et al. 2009e; Medford, Brown, Heywood, et al. 2009b; Perry and Howson 2009). In the New York African Burial Ground, possible family relationships were suggested by clusters of graves, shared graves, and the burial of personal adornments. Grave markers were used for some graves and could have been used for many more; the number of graves that were marked is simply unknown due to historical-period disturbance and a lack of documentation of the original ground surface during fieldwork. Evidence for grave markers and possible family relationships suggest that the graves of loved ones were remembered and memorialized. Given what the researchers learned about West and West Central African spiritual practices, it seems reasonable to assume that graves were periodically visited in order to commemorate and interact with the ancestors (Bianco et al. 2009; Howson and Bianchi 2009a; Perry and Howson 2009; Perry, Howson, and Bianco 2009; Perry, Howson, and Holl 2009a, 2009b, 2009c, 2009d).

A final major research theme for the project was African resistance to the conditions of enslavement (Blakey 2009a; Howson, Bianchi, and Perry 2009). Historical research documented a climate of intensified oppression throughout the period the burial ground was in use. Oppressive conditions worsened with the British assumption of political power in 1664. The British enacted increasingly repressive laws to control and punish enslaved Africans. Over time, new laws restricted public gatherings (including funerals), manumission, exchange, and interaction among enslaved Africans as well as codified slavery as hereditary and racialized. Laws allowed for harsh corporal punishments of enslaved Africans who broke the City's laws and limited the ability of Africans to act as witnesses. At the same time, Africans were not provided a jury of their peers to decide cases, and

courts convicted New York Africans at a higher rate than New York Europeans accused of similar crimes (Medford, Brown, Carrington, et al. 2009c, 2009d; Medford, Brown, Heywood, et al. 2009b; Medford and Brown 2009a, 2009c).

Resistance was very important to building solidarity in the New York African community and in asserting and maintaining human dignity. Specific acts of resistance included insubordination, theft, assault, arson, murder, escape, and rebellion, but also included the affirmation of African-derived values and customs in daily life. The uprising of 1712 is a powerful example of collective resistance that demonstrates the lengths taken by enslaved Africans to fight for their freedom and their dignity; events that surrounded the great "conspiracy" of 1741 also demonstrate the depth of New York African resistance (Medford and Brown 2009a, 2009b, 2009c; Medford, Brown, Carrington, et al. 2009c, 2009e). Some trauma, such as that seen on a woman who was shot and beaten, could have resulted from an act of resistance, but this cannot be known with certainty (Wilczak et al. 2009). Limited evidence for burned bone could also be interpreted as evidence for burning at the stake, which was a historically documented punishment for Africans who resisted their oppressors (Blakey 2009a). During the Revolutionary War, many African New Yorker escaped slavery by joining the British, but many also died in New York during the War. After the War, escaped Africans continued to flock to the City, and social and religious institutions that openly served Manhattan's African American community began to emerge (Medford and Brown 2009a).

As an African American religious and social institution—the first in New York and perhaps the first in North America—the African Burial Ground was a critically important locus of African resistance where Africans asserted their basic humanity through the proper burial of friends and loved ones. The available historical information suggests that African New Yorkers controlled their own funerals; the only apparent involvement of enslavers was the probable provision of a coffin to the enslaved. During a century or more of use, thousands of Africans were buried in the African Burial Ground, bearing silent testimony to the humanity and suffering of New York's enslaved population. After the burial ground closed around 1795, African New Yorkers established new burial grounds for their loved ones. The researchers suggest that, as a social and religious institution, the African Burial Ground lived on with the development of African churches and mutual aid societies. With the rediscovery of the site in 1991–1992, the legacy of the African Burial Ground continues to live on as the contributions and struggles of New York Africans are researched and commemorated (Blakey 2009a; Blakey, Rankin-Hill, Goodman, et al. 2009; Howson, Bianchi, and Perry 2009; Medford and Brown 2009a, 2009b; Perry, Howson, and Bianco 2009).

African Diaspora Studies

The New York African Burial Ground Project research was conducted within the scholarly framework of African Diaspora studies and has produced more-informed research results as a consequence of this perspective. African Diaspora scholarship has much to offer to anthropology and archaeology, although American archaeology has tended to ignore this large body of research (Blakey 2009b). Yelvington (2001:277–278) remarked, for instance, that

> The current anthropological concern with processes of globalization, dispersion, migration, and transnationalism, citizenship; with colonialism, the historical development of cultures, cultural hybridity, cultural politics and the politics of culture, difference and disjuncture; with resistance, structure and agency can be presented as "new," "cutting edge," or "hot topics" only by eliding and implicitly dismissing foundational scholarship on the anthropology of the African diaspora in the Americas, such as that of W. E. B. DuBois (1868–1963), St. Clair Drake (1911–1990), Zora Neale Hurston (1903–1960), Katherine Dunham (1909 [d. 2006]), Jean Price-Mars (1876–1969), Rómulo Lachantañeré (1909–1952), or Arthur A. Schomburg (1874–1938) to name only a few.

The research findings of the New York African Burial Ground Project include historical, biological, and cultural information about enslaved African individuals in Colonial and early Federal period New York City. This information substantively adds to a key research focus of African Diaspora studies, understanding the experiences of African-descended persons in the diaspora. The research also elucidated the origins of individuals interred at the New York African Burial Ground without resorting to racial typologies and

supports the vindication of the historical and cultural contributions of Africans and African-descended persons in the diaspora (LaRoche and Blakey 1997; Mack and Blakey 2004).

The New York African Burial Ground Project is a prime example of activist scholarship and community partnering and exemplifies well the traditions of African Diaspora research (Epperson 2004). It was through community engagement and the political pressures brought to bear on the GSA that the positive changes in the research, including the inclusion of questions relevant to descendant community members, were made possible. Without public engagement and the support of the descendant community, the researchers would not have been able to pursue some of the studies that proved useful, such as isotope and genetic analysis using destructive techniques (Blakey 2009a, 2009c). Between 1993 and 2006, the OPEI routinely engaged with the public to disseminate information on the project and on the African Diaspora, sponsored community events, and involved members of the public in the project as volunteers, interns, and community partners. Like the OPEI's internship program for high school and college students, the researchers involved many undergraduate and graduate students in conducting the research, providing unique opportunities for enrichment and professional training (see Chapter 2).

The highly visible and often heated struggle for control of the project resulted in a reckoning of African Diaspora archaeology with African Diaspora studies. The research design lifted the project out of particularistic local histories and placed the research instead within the broader context of African Diaspora studies. As Mack and Blakey (2004:15) have noted:

> If one views those interred in the African Burial Ground simply as slaves, as isolated characters in a local colonial American setting, one would ask different kinds of questions and get different answers regarding local artifacts and skeletal remains. The more we understand about Africa and the Caribbean, the more we can see their influences on the people in New York.

Interpretations of the individuals interred in the New York African Burial Ground also benefited from the expertise of the research team, many of whom were grounded in African American history and African Diaspora studies. Before the New York African Burial Ground Project, ignorance or dismissal of African Diaspora studies within historical archaeology had led to the assumption that general competence in historical archaeology was all that was necessary to excavate and interpret African Diaspora sites (LaRoche and Blakey 1997:92, 95). The Howard University New York African Burial Ground team raised the bar for the qualifications of African Diaspora archaeologists and demonstrated a clear need for specialized expertise in African Diaspora studies (LaRoche and Blakey 1997). As a result of the New York African Burial Ground Project, it is now more widely understood that the archaeological study of African Diaspora sites should include knowledge of African Diaspora scholarship, the active and respectful involvement of descendant communities, and an awareness of the roles race and privilege play in influencing current research (e.g., Brown 1997; McDavid 1997; McKee 1994; McKee and Thomas 1998; Mullins 2006; Wilkie 1995).

A similar reckoning with bioarchaeology also resulted from the New York African Burial Ground Project. The New York African Burial Ground research team insisted on asking questions relevant to African Diaspora studies rather than asking questions derived from outdated scientific paradigms that are clouded by race and racial typology (Blakey 2009c; LaRoche and Blakey 1997; Mack and Blakey 1994). The researchers' African diasporic approach challenged the biases of existing research strategies and confronted problems with the lack of appropriately comparable osteological samples, which made it difficult to trace the origins of individuals interred at the New York African Burial Ground to the level of detail pursued by the researchers. As Blakey, Rankin-Hill, Goodman, et al. (2009:271) observed:

> Every effort to make comparisons with other skeletal populations attempted to drag us back to race. Whether DNA, dental morphology, or craniometry, the comparative data of anthropologists tended to have taken perfectly good measurements of specific ethnic, linguistic, or historically particular regional groups and then aggregated them into sub-Saharan, West African, black, white, or some other pseudo biological category. Such essentially racial categories are irrelevant to ascertaining the more specific African geographical regions, and the historically relevant cultural groups within such regions, with which a skeleton's biological distinctiveness is associated.

The researchers responded proactively to these challenges. For instance, a lack of comparative DNA data led to the establishment of African genetic data banks in Cameroon and elsewhere under Dr. Fatimah Jackson's leadership (Blakey, Rankin-Hill, Goodman, et al. 2009:272) (see Chapter 4). This project has begun to provide the comparative data needed for the analysis of the more specific African cultural and geographical origins of individuals interred at the African Burial Ground and other sites of the African Diaspora and has allowed living African-descended people in the diaspora to trace their ancestors' origins (Blakey, Rankin-Hill, Goodman, et al. 2009; Gates 2009).

In short, New York African Burial Ground research was explicitly grounded in African Diaspora studies, and many research decisions and directions resulted directly from that involvement. The debates and struggles throughout the New York African Burial Ground Project's history have much to do with this innovative research focus. The debates and struggles that emerged have had many positive benefits for African Diaspora studies and African Diaspora archaeology. The New York African Burial Ground Project has created an unprecedented opportunity to increase the relevance of African Diaspora studies to history, archaeology, and biology. In doing so, the project has demonstrated a clear need to design research according to an African diasporic perspective as well as to develop appropriately scaled biological, archaeological, and historical data that are relevant to answering the refined and corrective questions raised by African Diaspora scholarship. In addition, the project has helped to redefine the field of African Diaspora archaeology in terms of (1) its relationship with other disciplines, (2) its relationship with descendant communities, (3) the qualifications and obligations of practitioners, and (4) the role of race in the discipline.

The Discipline of Archaeology

The New York African Burial Ground Project is central to current archaeological theory and practice and has prompted many important questions. How is archaeological knowledge produced, and who stands to benefit from archaeological research? Why is it even performed? How can it be practiced to meet the diverse needs of professionals, descendant communities, and contracting agencies?

Sociopolitics of Scientific Research

Archaeologists increasingly realize that their efforts are not apolitical and that archaeological research often has political, social, and ethical implications for diverse publics, including descendant communities (Leone et al. 1987; Moss 2005). A major trend in African Diaspora archaeology is the recognition of "sociopolitics of archaeological practice" (Franklin 1997a; Singleton 1999:1). The increasing willingness of archaeologists to recognize and accommodate the sociopolitical implications of their research can be attributed in many ways to the New York African Burial Ground Project. The New York African Burial Ground research demonstrates that public engagement as a way to serve the interests of the descendant community and as a source for developing research directions is not incompatible with scientific research. In fact, many of the positive outcomes of the project have both political and scientific implications. The New York African Burial Ground Project demonstrates that there are subjective and political components to archaeological research; that multiple and competing interpretations of data are appropriate when plausible and logically coherent; that meaning is layered, contextual, and contingent; and that the concerns of descendant communities should be recognized and actively incorporated in the design and implementation of archaeological research and in the curation and reinterment of human remains and items of cultural patrimony.

At the same time, archaeologists need to be cognizant of their role in political movements and how scientific results are used for political ends. Archaeologists can unintentionally become the tools of political factions. In working with descendant communities, the possibility of factionalization and the implications of working for political factions require careful consideration (Baugher 2005; Brumfiel 2003). Moreover, contributing scientific knowledge to inform on political issues is different from uncritically using research as a political tool. With regard to this problem, archaeologists need to reserve scientific judgment to observable facts and testable theories (VanPool and VanPool 1999). The New York African Burial Ground Project was a testing ground for the interaction of scientific and political goals. As Blakey (2009b:44) has insisted, scholars investigating sites such as the New York African Burial Ground need to base their interpretations and discussion on material evidence. Indeed, the rigorous scientific methods of the research

team were necessary to establish much of what was learned about the African Burial Ground. The scientific research team used intersubjectively testable and verifiable methods based on theoretical systems, scales of measurement, and instruments of measurement in order to establish plausible and logically coherent interpretations of empirical data.

Historical Archaeology

Early approaches to historical archaeology, once characterized as "a handmaiden to history," were preoccupied with sites associated with historically important white men (Paynter 2000b:170). Typical subjects were "pilgrim fathers, plantation owners, past presidents, battlefields, forts," etc. (Paynter 2000b:170). Minorities, such as women, Chinese Americans, Latin Americans, or African Americans, were generally ignored in many investigations, as were issues having to do with identity, gender, class, race, or power relations (Paynter 2000a, 2000b). Orser (1999:662) argues that "the failure of American historical archaeologists to address race and racism in any substantive way has served to maintain the field's tacit political conservatism, a stance consistent with the traditional use of historical archaeology to examine sites associated with places and personages important in the dominant national ideology." Well-developed theoretical discussions in historical archaeology are overshadowed by a predominance of "archaeography," or "the detailing of aspects of the post-Columbian way of life" (Paynter 2000a:3). In this sense, studies in historical archaeology are sometimes associated with the simple testing or confirmation of historical "fact," and historical archaeology is dismissed as the "junior varsity" of anthropological archaeology (Little 1994:30).

The field is changing, however. Theoretical orientations, particularly those with postprocessual leanings, are beginning to take center stage. The articulation and expression of power through gender, class, or race relations, for instance, has recently been a focus of many studies (Paytner 2000b:172). Studies of class relations have focused on relationships between workers and business owners within the context of industrial capitalism. Less attention has been paid to the transition from tributary or kin-based production to capitalist relationships (Paynter 2000b:177), although commercial urban centers like New York City may be ideal contexts to study the emergence of capitalistic production. The forcible migration of enslaved Africans, many of whom came from political economic systems based on kinship ties, to places like New York City may in fact embody the transition from kin-based production to capitalist production. As such, sites such as the New York African Burial Ground have the potential to inform on these research issues.

The New York African Burial Ground Project is widely considered an "exemplary collaboration in historical archaeology" (Paynter 2000b:186). The successes of the project have already been cited in many discussions, particularly in terms of the sociopolitics of archaeological practice, the importance of involving descendant communities in archaeological research, and the project's unique contribution to studies of slavery and racial formations in the colonial Americas (e.g., Armstrong and Fleischman 2003; Baugher 2005; Blakey 1998a, 2001; Cantwell and Wall 2001; Epperson 1999a, 1999b, 2004; Franklin 1997a; Franklin and McKee 2004; Handler 2006; Jamieson 1995; LaRoche and Blakey 1997; Leone and Fry 1999; Leone et al. 2005; Mack and Blakey 2004; McCarthy 1996; Paynter 2000b; Perry and Paynter 1999; Prince 2006; Singleton 2001a; Thomas 2002; Wilkie 2004; Wilkie and Bartoy 2000). More publications will certainly follow as researchers continue to study the site and its implications. As Paynter (2000b:186) has observed, the research "promises to transform the city's local history and historical archaeology's practice and the study of the history of the racial formations of the post-Columbian world." To Epperson (1999a:81–82), the New York African Burial Ground Project "provides an ideal opportunity to address several aspects of the archaeology of capitalism, including the social construction of racial categories, the formulation of hegemonic and counterhegemonic historical consciousness, the essentialist/social constructionist debate, and the role of descendant communities and their allies in archaeological, historical, and bioanthropological research."

Studies of race have a long history in anthropology and can be organized into "two distinct camps: one rejuvenates an essentialist position on the biological reality of races . . . and another sees 'race' as an ideological and political economic phenomenon of the post-Columbian world" (Paynter 2000b:179). The New York African Burial Ground research clearly stems from the latter approach and is explicitly differentiated from essentialist positions (Epperson 1999b). The use of racial typing in skeletal analysis, for instance, was soundly rejected by the researchers (Blakey 1998a, 2001, 2009c). New York City is an especially ripe

territory for understanding the formation of race, race relations, and a racialized political economy (e.g., see Foote 1991, 2004). Racial formations are important to understanding capitalist labor economies but also to understanding ideological and social constructions of the modern world. Ideological constructions of racial hierarchy have guided the treatment and study of African Americans and Native Americans. White supremacy and social Darwinism, for instance, are ideologies based on hierarchical race concepts (Paynter 2000b:180). Modern concepts of blackness and whiteness emerged during the late-seventeenth century in the contexts of slavery (Epperson 1999a). The New York African Burial Ground research clearly demonstrates that an ideology of white supremacy and the racialization of production was not confined to southern plantations but was a common feature of northern and urban economies as well.

In developing interests in African Diaspora archaeology, historical archaeologists have increased the visibility and accuracy of modern concepts of historical African American experiences. At the same time, African Diaspora archaeology has "inadvertently created an ethnic archaeology of the Other. This result, combined with findings confirming that the archaeology profession in this country is almost totally white, have produced a study of ethnicity that more often reflects the perspectives of its investigators than the perspectives of those being investigated—an outcome that is the exact opposite of what this research was intended to do" (Singleton 1995:122). Similarly, Patten (1997:132) has argued that archaeologists' "current perception of the ways in which categories of race, ethnicity, or religion marginalize identities often becomes the structure of our research." An obvious solution to this problem is to more actively incorporate African American perspectives into archaeological research. This imperative can be partially achieved by (1) involving African American descendant communities more fully in research, (2) incorporating to a greater degree African American history and intellectual traditions in research agendas, and (3) promoting and encouraging the professional advancement of African Americans in the discipline. The New York African Burial Ground Project has contributed to all three of these goals. For instance, "the initial problem of black exclusion at the New York African Burial Ground Project was also followed by a small but noticeable increase in outreach to black students by archaeological projects" (Blakey 2009a:14).

African Diaspora Archaeology

African Diaspora archaeology (which includes African American archaeology) is one of the most exciting and vibrant fields of research in historical archaeology today. The leading edge of current research in historical archaeology is dominated by studies in African Diaspora archaeology. Following the excavation of the New York African Burial Ground, many insightful and challenging articles have addressed issues in African Diaspora archaeology. It is not our intention to recapitulate all those insights and arguments here. Rather, a few of the major trends in African Diaspora archaeology are highlighted in order to understand how New York African Burial Ground research fits into this larger research program.

In the United States, African Diaspora archaeology gained serious traction and momentum with the passing of historic preservation laws in the mid-1960s and early 1970s (Singleton 1995). Interest in African Diaspora archaeology emerged from the combined effects of multiple forces: "black activism, the passage of historic preservation legislation, the emergence of an archaeological interest in American ethnic groups, and the increased use of archaeology in the public interpretation of historic sites, including plantations" (Singleton 1995:120). Since its inception more than a half-century ago, African American archaeology is now one of the "fastest growing specialties within historical archaeology" (Paynter 2000b:183) and has numerous landmark investigations to its credit (Joseph 2004). Plantation archaeology, in particular, has contributed substantially to the development of historical archaeology and has propelled advances in African Diaspora archaeology (Singleton 1990). At the same time, a heavy focus on plantation archaeology has led to false impressions that the locus of slavery and oppression occurred mainly on the larger and wealthier southern plantations and has shifted attention away from the diverse life experiences of African-descended people in the Americas. New York African Burial Ground research offers perspectives rooted in northern, urban, maritime, and mercantile contexts and thus helps to dispel misconceptions about the contexts of enslavement.

In attempting to give "voice to the voiceless," African Diaspora archaeology focused on African survivals in everyday African American life and developed "overly simplistic" interpretations of African American communities (Singleton 1999:2). The complex material and behavioral interactions of African Americans

with others in terms of their forced subordinate position was largely overlooked. This research focus, in identifying and interpreting African survivals, lingers on today and presents "the search for cultural markers linked to Africa as the most significant aspect of African-American material life" (Singleton 1999:2). Thomas (2002:147–148), for instance, has noted that regardless of theoretical orientation, "archaeologists studying African-American sites—particularly pre-emancipation sites—continue to take great delight in finding artifacts we can attribute to the 'Africanness' of those who once lived at these sites. Despite the different ways that archaeologists may view and interpret 'Africanisms,' or African holdovers, we all seem to share one sentiment: we all really want to find them on the sites we excavate. Let's face it—we find it comforting. As archaeologists, we have a strong desire to see the 'Africa' in African-American sites." Thomas (2002) has cautioned, however, that our dependence on such material linkages to interpreting identity restricts our ability to fully understand African American material life and identity formation.

Certainly, the lack of African provenance for artifacts at African American sites does not indicate that African-derived identities did not exist. Scholarship over the last few decades demonstrates that African Americans shared and developed heritages distinct from those of other Americans. Distinctive components of African American heritages are manifested in many areas of daily life, including cultural preferences, foodways, craft production, music, art, language, and religious practice. Yet, crucial archaeological understandings remain unresolved. Singleton (1999:8) has asked: "How was this cultural identity constructed in specific settings and how can it be interpreted from archaeological resources?" Studies of identity formation at sites like the New York African Burial Ground may be crucial to understanding how African heritages of individuals in the Americas influenced identity formation in an urban, mercantile, maritime, colonial context.

In the 1960s and 1970s, the rationale of African Diaspora archaeology was "to tell the story of Americans—poor, powerless, and 'inarticulate'—who had been forgotten in the written record" (Singleton 1999:1). This view of African Diaspora archaeology has changed. African Diaspora archaeology "is no longer seen as simply an effort to capture unrecorded aspects of black history or to bring attention to the heritage of a neglected community" (Singleton 1999:1). Instead, African Diaspora archaeology is framed as the archaeology of the African Diaspora or the archaeology of the black Atlantic World (Orser 1998). The archaeology of African colonial experiences in the Americas is now considered crucial to understanding European and Native American colonial experiences. African Diaspora archaeology is no longer about filling in the gaps of historiography but is an essential route to understanding key issues of race, ethnicity, class, gender, cultural transformations, exchange, racial ideology, race relations, and power relations on both sides of the Atlantic basin (Agorsah 1996). Increasingly, African Diaspora archaeology merges with other studies of the African Diaspora, in order to understand how enormously complex and broadly scaled historical processes contributed to the formation of African American experiences.

As a result of the New York African Burial Ground Project, historical archaeologists now realize that better interpretation of the African American archaeological record requires a better understanding of archaeology and cultural practices in West Africa and West Central Africa in addition to those in the Americas (Agorsah 1996). Until recently, little research has questioned how African archaeology informs on African Diaspora archaeology, and vice versa. The work to develop connections between African and African American archaeologies has begun, but much more remains to be learned (see, for example, papers in DeCorse, ed. [2001] and papers in Ogundiran and Falola, eds. [2007]). As an Americanist, Singleton (2001a) has outlined three issues that she considers important to the study of African archaeology. First, many areas of West Africa and West Central Africa are virtually unknown archaeologically and unevenly researched (DeCorse 2001b). "Senegal, Ghana, and Nigeria have comparatively well-developed research and educational infrastructures," whereas archaeological knowledge of other areas is speculative and preliminary (DeCorse 2001b:2). Second, it is difficult to distinguish archaeologically between processes of political centralization and processes of enslavement (MacEachern 2001). Third, in order to understand processes involved with creating the archaeology of West Africa and West Central Africa, the effects of the Saharan trade in enslaved Africans need to be differentiated from the effects of the transatlantic trade in enslaved Africans (McIntosh 2001; Singleton 2001a). Resolving these issues could contribute substantially to contextualizing and interpreting African Diaspora sites in the Americas, such as the New York African Burial Ground.

African Diaspora archaeology is a crucial testing ground for new trends in archaeological research, such as how archaeologists define research domains and how they interact with the public and descendant communities. Many issues raised in African Diaspora archaeology speak to the "sociopolitics of archaeological practice" (Singleton 1999:1; see also Franklin 1997a). Franklin (1997a) has questioned the intentions of historical archaeologists in investigating the African American past. Franklin (1997a:37) posed the question, "Has the black archaeological past been colonized by white, middle-class specialists?" Although to control or distort the African American past is probably not the intention of most historical archaeologists studying African Diaspora sites, the use of archaeology to underwrite nationalistic, genocidal, or racist political agendas is not uncommon (Trigger 1989). Moreover, the subtle and pervasive ways in which racial ideologies have structured scientific and historical consciousness may not be recognized by individuals lacking training in African Diaspora studies.

A concern that was of fundamental importance to the study of the New York African Burial Ground and that continues to be important to the study of other African American sites is the imperative for African Americans to be involved in African American archaeological projects. That African Diaspora archaeology is largely studied by Euroamericans is problematic, as it brings a biased perspective to African Diaspora archaeology that may often be ignorant or insensitive to African American identities and African American history. One way to increase African American involvement is by involving African American descendant communities in research. Franklin (1997a:37), for instance, has suggested that archaeologists "make more of an earnest effort to involve black Americans in research and interpretations." Another way is through recruitment and education of African Americans in archaeology. A critical question that has emerged in a number of high-profile investigations of African American sites is "Why are there few black American archaeologists?" (Franklin 1997b:799). Of the 1,500 members of the Society for American Archaeology who responded in 1997 to a survey question on ethnicity, only around one-tenth of 1 percent responded that they were African American. That same year, Franklin (1997b) could identify only four African Americans with Ph.D.s in archaeology. That number has certainly increased in the last decade, but probably not as much as it needs to.

Cultural Resource Management

The New York African Burial Ground project was paid for with public funds allocated to CRM, rather than paid for by a grant from the private sector or a nonprofit institution. The applicability of Section 106 of the NRHP as amended to the project is what enabled the extraordinary research opportunities pursued by the researchers. As part of the regulatory process, the amended MOA—signed in December 1991 by the Advisory Council on Historic Preservation, the GSA, the NPS, and the LPC—provided measures to ensure public outreach, the building of a memorial and an interpretive center, and the respectful removal, analysis, and reinterment of human remains and burial-associated artifacts.

Like the New York African Burial Ground Project, most archaeological work in the United States today is conducted in the context of CRM. The lion's share of projects, money, and labor are dedicated to CRM. At least four of every five archaeologists working in the United States works in CRM. Funding for CRM research is as much as 20 times that of academic research (Green and Doershuk 1998). Altschul and Patterson (forthcoming) recently calculated that the CRM industry does nearly a billion dollars' worth of business per year. CRM studies are particularly important in the United States because they offer the opportunity to collect data on many different kinds of sites that might be overlooked by more-finely focused academic research programs (Green and Doershuk 1998:133). Despite the large amount of data generated through CRM investigations and the many different kinds of sites and contexts investigated, CRM reports "devote relatively little explicit attention to theoretical frameworks" (Green and Doershuk 1998:129). The same problems are found in CRM studies of African Diaspora sites. Many new data have emerged, but little explicit attention is paid to theoretical frameworks, analysis, or "the reformulation of research goals" (Samford 1996:113; see also LaRoche and Blakey 1997:92; Singleton and Bograd 1995). Few of these data are analyzed in any substantive way. As of October 2005, more than 500 reports related to aspects of African American heritage were included in the reports module of the National Archaeological Database (Fennell 2005). Although this amounts to around 0.15 percent of the approximately 350,000 reports listed, information from only a minority of these reports has been brought to bear in major publications on African Diaspora archaeology.

Since the inception of CRM, an uneasy relationship has existed between it and academic archaeology. Academic archaeologists have routinely decried the myopia and particularism of compliance-oriented archaeology as well as suggested that business and financial concerns corrupt the integrity of archaeological research. Professionalism is an issue that often comes up in these kinds of discussions, the implication being that CRM workers are often unprofessional. But as Gray (1999) has noted, neither CRM nor academic archaeology can claim an overabundance or lack of professionalism. Academic archaeologists often cast CRM research unfairly in a negative light. It is true that "routine, unimaginative field and analytical methods and boilerplate reports characterize large parts of the field" (Green and Doershuk 1998:130), but innovative methods and reporting are also in evidence (Gray 1999). Innovative, high-technology advances in field methods and analysis—such as those involving remote sensing, geographic information systems, or data management—are often pioneered in CRM (Gray 1999; Green and Doershuk 1998).

CRM funds big projects that have the potential to answer big questions, but many CRM reports, including those reporting on African Diaspora sites, are compliance-oriented reports that interpret results according to unimaginative boilerplate contexts. The potential significance or relevance of historical-period sites to archaeology, history, or descendant communities is rare in CRM studies. A common criticism of CRM investigations is that despite the millions of dollars expended and the hundreds of thousands of reports produced, few investigations can claim substantive results or the production of new knowledge. Thus, for many CRM studies, there is always a risk that, although abundant data are generated on diverse sites, particularly those threatened by development, little understanding of investigated sites is gained. How sites fit into a bigger picture or inform on major events or processes is often lost, leaving investigators and the public to wonder: what are we learning (e.g., Altschul 2005)?

CRM has made important contributions to African Diaspora archaeology. At the same time, theoretical advances are notably lacking. CRM investigations, for instance, have frequently conceptualized African Diaspora archaeology within a framework of acculturation. Interpretations offered by CRM studies have tended to argue that African Americans had become largely acculturated or Americanized by the nineteenth century (Joseph 2004). As Joseph (2004:21) has argued, however, "culture change . . . is not acculturation." Evidence for retention or extension of African beliefs and practices has been found at many sites (e.g., Fennell 2000; Ferguson 1992, 1999; Leone and Fry 1999; Singleton and Bograd 1995; Stine et al. 1996; Wilkie 1997), including the New York African Burial Ground, and most archaeologists studying the African Diaspora prefer alternate models of culture process, such as historical creolization, domination and resistance, and resistant accommodation. These models should be evaluated using archaeological and historical evidence, and new models of culture process should be developed to account for the evidence.

Further, CRM has also been dominated by Euroamerican professionals who "rarely seek academic preparation in African American studies departments, and very few faculty of African American studies departments have been contracted by archaeologists" (LaRoche and Blakey 1997:92; see also Leone et al. 2005:596). The New York African Burial Ground has raised the bar for the standards in CRM by requiring more advanced scholarship in African Diaspora studies to be applied to the study of African Diaspora sites. To LaRoche and Blakey (1997:93), "Seizing intellectual control has meant that the criteria for competency have been expanded to include an affinity for African-American culture, past and *present*, and comfort with and knowledge of the politics of African descendant populations, their cultures, and their histories."

Cultural Resource Management and the African Burial Ground

The New York African Burial Ground Project began as a fairly routine, compliance-oriented CRM investigation. As discussed in Chapter 2, the initial fieldwork was performed by a CRM firm contracted by the GSA. The analytical phase of the fieldwork, while still contracted with the GSA, involved the collaboration of CRM professionals and academic researchers affiliated with major universities and institutions (Blakey 2009a).

In a sense, the New York African Burial Ground Project is almost two projects: (1) the fieldwork phase of work and (2) the analytical, interpretive, and reinterment phases of work. The fieldwork phase of work is generally cast in a negative light. It was performed (1) mainly by Euroamerican archaeologists, (2) working in CRM, (3) with varying levels of experience in African American burials or sites and limited under-

standing of African American history or bioarchaeology, (4) under intense pressure, (5) according to a rushed schedule, (6) without an adequate research design, (7) with insufficient curatorial supplies or procedures, (8) in violation of the GSA's Section 106 responsibilities, (9) and against the wishes of segments of the descendant community. Further, the excavations at the site were conducted in a way that (10) was perceived as desecrating a sacred site, (11) resulted in excavation errors and security breaches, and (12) required African American politicians and scholars, as well as representatives from multiple municipal, state, and federal agencies, to intervene and oversee the process (see Chapter 2).

To many of the people involved, the fieldwork phase of the project was a political nightmare. As visible as the project was, the many difficult issues that converged on the project extended far beyond the project itself. Although field archaeologists and the associated CRM firms became the target of much criticism, the root of these enormous problems went far beyond the archaeologists conducting the work. Many problems stemmed from insensitive and unbending governmental policies and procedures, historical issues, existing research traditions, and inadequate legal frameworks for protecting African American burials and associated grave goods. Blakey (2009a:8) noted disturbing parallels between political economic conditions when the African Burial Ground was used and when it was excavated by archaeologists two centuries after its abandonment. Some problems in how the site was studied and how the descendant community was treated may have resulted from a racist political economy and the pervasive influence of late-twentieth-century racist ideologies (Mack and Blakey 2004). As Blakey (2009a:15) has observed, the controversy surrounding the site and the public's efforts to stop excavation:

> was viewed by the descendant community as a continued refutation of African American humanity and dignity. This attention to the site was also the result of the powerful revelations that the excavation and the research team's initial findings produced about a past of African enslavement and African contributions to nation building that had been buried and hidden from the American consciousness (Blakey 1998a). Indeed, the educated public had long been taught that there had been few blacks and no slavery in the American North. Now the undeniable contradictory evidence confirmed the African American vindicationist critique of pervasive Eurocentric distortion of American and world history.

The analytical, interpretive, and reinterment phases of work performed by Howard University and John Milner Associates, Inc., form a striking contrast to the fieldwork phase of work. Following the project requirements set forth in the amended MOA of December 1991, this second project consisted of three components: (1) the analytical or research component, (2) public engagement and education component, and (3) the curation and repatriation component. Instead of a botched political fiasco, these phases of work are hailed as resounding successes to be celebrated and commended (LaRoche and Blakey 1997). To the researchers, these phases of work (1) represent an unprecedented seizure of intellectual power; (2) were conducted by a racially and ethnically diverse research team, many of whom were African Americans with backgrounds in African and African American history or bioarchaeology; (3) actively engaged and involved the descendant community in guiding research directions and deciding on the course of the project; (4) treated the deceased and their descendants with dignity and respect; (5) developed a sophisticated and theoretically relevant research design; (6) raised the standards for CRM research at African American sites; (7) integrated research from multiple disciplines, including history, archaeology, and skeletal biology; (8) regularly interfaced with and educated the public through multiple media; (9) developed databases and crucial frames of reference for ongoing research; (10) prompted positive change in some aspects of the profession; (11) inspired new insights into African Diaspora archaeology, history, and bioarchaeology; and (12) endeavored to make the project data and reports widely available to the scientific community and the public (Blakey 2009b; LaRoche and Blakey 1997).

The New York African Burial Ground research design was driven by an expanded and refined theoretical framework based on African Diaspora studies and vindicationist scholarship. Howard University and John Milner Associates, Inc.'s research design was an innovative and unprecedented attempt to make New York African Burial Ground findings relevant to events and processes happening at scales that went far beyond more particularistic studies of colonial Manhattan. The researchers attempted to contextualize the New York

African Burial Ground in the broadest sense, as one of many sites throughout the Atlantic World that can be used to inform on the African Diaspora and the political economies of racism and slavery. In this sense, the research assumed a wider field of academic and social relevance than most CRM projects achieve.

National and International Significance of the African Burial Ground as a Cultural Property

The significance of the African Burial Ground extends far beyond the confines of the site, far beyond New York City, and far beyond the United States. As LaRoche and Blakey (1997:84) explain, "excavation of the African Burial Ground has global and universal implications which transcend urban archaeology, physical anthropology, or the concerns of any one group." The African Burial Ground is emblematic of slavery and the struggles of Africans and African Americans in the diaspora against racism and oppression. The research helps Americans remember the past and encourages the scientific community and the public to learn more about the history of enslavement, the trade in enslaved Africans, the diverse cultural backgrounds and experiences of Africans in the diaspora, the development of African American culture and identity, and the assertion and maintenance of human dignity. Understanding these issues is crucial to understanding the modern world.

Determinations of significance are used in a variety of ways to assess the eligibility of a site for protection and management. The protection and development of a heritage site, such as the African Burial Ground, is partly afforded by its inscription on local, state, federal, or international heritage lists and the development of management plans. The African Burial Ground is protected through its designation as a New York City Landmark, a National Historic Landmark, and a National Monument.

In archaeology, significance is based on the theoretical framework used to evaluate a site (Altschul 2005:198) as well as the legal framework that defines criteria for determining significance. Different laws and conventions, such as the National Historic Preservation Act (NHPA) of 1966 as amended and the World Heritage Convention, establish different criteria for determining significance. Many sites in the United States are protected under the NHPA, which protects sites based on the determination of significance and integrity. The evaluation of a site's significance according to the NHPA is performed based on its association with one or more of four criteria. In a general sense, a site is considered significant under NHPA if it is determined to:

A. be associated with events that have made a significant contribution to the broad patterns of our history; or

B. be associated with the lives of persons significant in our past; or

C. embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or

D. have yielded, or may be likely to yield, information important in prehistory or history.

Unfortunately, the process of determining significance under the NHPA has become rigid, formalized, and unimaginative. Many sites are recommended as eligible for protection under the NHPA, although a much smaller number are actually determined eligible and listed in the NRHP. Currently, more than 80,000 sites have been nominated for listing in the NRHP; 2,400 of these have been formally designated as National Historic Landmarks. Most sites are recommended as significant under Criterion D as contributing to an important archaeological research question. Typically, archaeological research questions considered important under this criterion are those that have to do with refining culture histories or with testing hypotheses about events or culture process (Altschul 2005). The research design argued that the New York African Burial Ground is eligible under Criteria A and D, which to the researchers suggests that the site is important for more than its information potential to archaeologists, historians, or bioarchaeologists.

Very few sites listed in the NRHP are affiliated with African American heritages (Seibert 2000). Failure to recognize or acknowledge the significance of African American sites is troublesome and raises the question of biases in archaeological discovery or in evaluating the eligibility of African Diaspora sites for listing in the NRHP. In Texas, for instance, sites affiliated with Euroamericans have been recommended as eligible for NRHP listing at a much higher rate than African American sites (Barile 2004).

National Park Service Listening Sessions

The significance of a site to a descendant community could differ substantially from significance as determined by archaeologists. In 2004, the NPS solicited input on the significance of the African Burial Ground from community leaders, activists, and other interested parties through a civic engagement process that included listening sessions and public meetings. People and organizations who contributed opinions to the planning process for management recommendations included Friends of the African Burial Ground, Committee of the Descendants of the Ancestral Afrikan Burial Ground, former Howard University research team members, former African Burial Ground Steering Committee members, Memorial Advisors, OPEI volunteers, Peggy King Jorde, and the New York Public Library's Schomburg Center for Research in Black Culture. The civic engagement process resulted in five observations on the significance of the site. The significance of the site as determined through listening sessions seems to have more to do with the site's association with important events and broad trends in enslavement, the African Diaspora, and the development of New York than it has to do with its ability to inform on important archaeological research questions:

- The African Burial Ground is tangible evidence of slavery in the North.
- The African Burial Ground is sacred space.
- The African Burial Ground shows the African contribution to the prosperity of New York City.
- The African Burial Ground demonstrates that the enslaved Africans were not a homogeneous people, but a group of individuals from diverse backgrounds.
- The African Burial Ground is a reminder that slavery still exists in the world [NPS 2006:iv].

A series of recommendations on how the site should be interpreted and used were also made:

- The African Burial Ground can and should tie into related Lower Manhattan points of interest
- The African Burial Ground should be a place to educate and reach people on various levels
- Preserve and protect the internationally important resources and values of the African Burial Ground
- Provide knowledge on its history and meanings
- Sustain and expand knowledge through continued research
- Take the lead in making the African Burial Ground a model for the care and interpretation of a sacred site
- Partner with like-minded organizations and agencies [NPS 2006:iv]

The recommendations developed through listening sessions clearly associate the African Burial Ground with broad historical processes that occurred on an international scale. Further, the African Burial Ground is seen as relevant to the protection and interpretation of other international resources and to sustained research on the African Diaspora. To the descendant community, the African Burial Ground is a valued and sacred cultural property requiring protection, care, and sensitive interpretation through the collaborative efforts of multiple organizations and agencies.

Native American Graves Protection and Repatriation Act

In the United States, archaeologists working on Native American sites are often required to consult Native American descendant communities and to treat Native American–affiliated human remains according to legal, professional, and ethical guidelines. The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) provides a process for institutions and federal agencies to repatriate sacred objects, funerary objects, objects of cultural patrimony, and human remains to Native American lineal descendants and culturally affiliated Native American organizations. Although some archaeologists initially saw NAGPRA as a burden that could cripple archaeological research, archaeologists are now more accustomed to consulting with Native American tribes and to designing more widely relevant, culturally sensitive, politically informed research. Following the passing of NAGPRA, the burden rests on archaeologists to make a case for studying Native American human remains, and the interests of Native American groups substantially influence the conduct of archaeologists. Archaeological research involving Native American burials now has to be aligned with the interests of Native American communities. Archaeologists can no longer work absent a relationship with the Native American groups they serve (Ferguson 1996).

The same legal protection afforded Native American communities through NAGPRA is not afforded to African American communities, or any other nonnative groups, for that matter. African Americans do not have an equivalent legal apparatus that ensures their involvement in deciding on the treatment of human burials, funerary objects, or objects of cultural patrimony. In the case of the New York African Burial Ground, widespread protest and intense public scrutiny were necessary to ensure that the voices of the descendant community were heard and that African American researchers were given the opportunity to direct research. It took the involvement of African American politicians, community activists, and scientists to change the course of New York African Burial Ground investigations and to establish explicit linkages between archaeological investigations and the concerns and interests of the descendant community. Essentially, African American researchers, politicians, and community activists seized intellectual and political power in the interest of the descendant community (LaRoche and Blakey 1997). Without that effort, it is unlikely that descendant community members would have been included in discussion as much as they were. Baugher (2005) has suggested that the political power of African Americans, as a significant voting block, was one factor that made the voices of the descendant community heard. Historical archaeologists now frequently cite and celebrate the achievements of New York African Burial Ground researchers in making the descendant community an important stakeholder and partner. Now, the New York African Burial Ground Project is emblematic of these issues. Archaeologists must ask themselves, however, if African American researchers, politicians, and community activists had not spearheaded the effort, would respectful treatment have occurred? Should legal protection similar to that required by NAGPRA be afforded to all burials and burial grounds?

World Heritage Sites

Few African Diaspora sites or sites in the United States are inscribed as World Heritage sites. The African Burial Ground is not currently inscribed as a World Heritage site, although efforts to nominate the site for inscription are underway. World Heritage sites are designated according to six cultural and four natural criteria outlined in the *Operational Guidelines for the Implementation of the World Heritage Convention* (2005), established by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Intergovernmental Committee for the Protection of the World Cultural and Natural Heritage (ICPWCNH). Cultural heritage, natural heritage, and mixed cultural and natural heritage properties are defined according to Articles 1 and 2 of the World Heritage Convention. Cultural heritage properties are monuments, groups of buildings, or sites. Natural heritage properties are natural features, natural sites, or precisely delineated natural areas. Cultural landscapes are "combined works of nature and of men" and are also defined by the World Heritage Convention.

Archaeological sites are worthy of inscription when they are considered to be of "outstanding universal value from the historical, aesthetic, ethnological, or anthropological points of view" (UNESCO and ICPWCNH 2005:45). As Pomeroy (2005:303) has noted, conventions used to determine "outstanding or personal value" are subjective and vague. Others have argued that "the criteria for assessing the outstanding universal value of sites nominated for inscription on the World Heritage List and their authenticity have been conceptualized, explained and understood from a European viewpoint" (Labadi 2007:152; see also Byrne 1991; Labadi 2005). The result of these ambiguous and Eurocentric conventions for determining value has been that "the distribution of cultural properties has grown uneven, both culturally and geographically, since 1978, resulting in a sample that is skewed toward the monumental heritage and religious architecture of Western Europe" (Pomeroy 2005:303). Since 1994, steps have been taken to correct this imbalance by implementing measures to develop a more representative global sample.

World Heritage sites associated with enslavement and the trade in enslaved Africans have typically been inscribed on the basis of Criteria iii, v, and vi for assessing outstanding universal value for cultural heritages:

> (i) represent a masterpiece of human creative genius; (ii) exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design; (iii) bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living

or which has disappeared; (iv) be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates a significant stage(s) in human history; (v) be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change; (vi) be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria.)

Inscribed properties associated with enslavement and the trade in enslaved Africans include the Island of Gorée (Senegal), a major slave-trading center from the fifteenth to nineteenth centuries (Criterion vi); James Island and Related Sites (Gambia), a series of sites on the River Gambia related to an important trade route to the interior for the trade in enslaved Africans (Criteria iii, vi); Forts and Castles, Volta, Greater Accra, Central and Western Regions (Ghana), fortified trading-posts erected between the fifteenth and eighteenth centuries related to trade routes and the trade in enslaved Africans (Criterion vi); Asante Traditional Buildings (Ghana), the last standing architectural remains of the Asante civilization (Criterion v); and Royal Palaces of Abomey (Benin), palaces founded in part on slavery and the trade in captive Africans (Criteria iii, iv), such as the palace of King Ghezo, whose bricks contain the dried blood of sacrificed war captives (Lovejoy 1997:2). Cultural landscapes and sites related to cultures from which some enslaved laborers were derived have also been inscribed, such as the Sukur Cultural Landscape (Nigeria), a landscape of sacred symbols, terraced fields, and ironworking facilities (Criteria iii, v, vi); the Osun-Osogbo Sacred Grove (Nigeria), a symbol of Yoruba identity, where a sacred grove, sanctuaries, shrines, and sculptures venerate Osun and other Yoruba deities (Criteria ii, iii, vi); and Royal Hill of Ambohimanga (Madagascar), a symbol of Malagasy identity consisting of a royal city, burial ground, and sacred places (Criteria iii, iv, vi). Based on New York African Burial Ground research, Criteria ii, iii, and vi could conceivably apply to the inscription of the African Burial Ground.

The UNESCO Slave Route Project

In 1993, during the twenty-seventh session of the general conference of UNESCO, the Slave Route Project (27C/Resolution 3.13) was approved. Nicéphore Dieudonné Soglo, the President of the République du Bénin, officially launched the UNESCO Slave Route Project at Ouidah on September 1, 1994. The purpose of the project is "to trace the slave trade from the original points of enslavement in the African interior, through the coastal (and Saharan) entrepôts by which slaves were exported from the region, to the societies in the Americas and the Islamic world into which they were imported" (Lovejoy 1997:1–2). The project is organized around four programs: (1) the scientific program, "Fight against Racism, Discrimination and Xenophobia"; (2) the teaching and education program, "Breaking the Silence"; (3) the program for promotion of cultures and living traditions generated from slavery and the slave trade; and (4) the program for cultural tourism related to slavery and the slave trade. The fourth program includes the Slave Trade Archives project, a project to preserve text and memory related to slavery and the slave trade. A celebrated achievement of the 2001 World Conference against Racism, Racial Discrimination, Xenophobia and Related Intolerance, held in Durban, South Africa, was the recognition of slavery and the slave trade as a "crime against humanity" (UNESCO 2006). More recently, the United Nations designated the years 2004–2007 as "International Years to Commemorate the Struggle against Slavery and its Abolition." As part of the 2004 commemorations, the New York Public Library's Schomburg Center for Research in Black Culture developed an exhibition with online and traveling components, Lest We Forget: The Triumph Over Slavery.

As the final resting place for thousands of Africans and African Americans, many of whom traveled UNESCO's Slave Route as a result of processes of enslavement and forcible migration, the African Burial Ground could be a highly significant point along UNESCO's Slave Route. The African Burial Ground is a testament to the attempts of enslavers to dehumanize enslaved Africans and African Americans and a potent symbol of the assertion and maintenance of human dignity among those who were enslaved. Further, the African Burial Ground formed during a crucial period in the racialization of American political

economies. Scientific research and educational programs developed around the African Burial Ground inform on the formation of race and racialization in the Atlantic World and thus, in their educational, cultural, and scientific values, contribute directly to the fight against racism, discrimination, and xenophobia.

Conclusions

New York African Burial Ground research is an excellent example of the potential for integrating history, biology, and anthropology in archaeological research. The synergy of findings from multiple intellectual traditions produces far more relevant information than could be achieved through archaeology alone. Moreover, New York African Burial Ground research demonstrates the need to ask big questions and the relevance of archaeological investigations to answering such questions about the human past.

In this report, a great deal of information about the African Burial Ground has been summarized and integrated. Together, these data contribute to a greater understanding of a site that was not lost to history but was underappreciated and not well understood. As Medford and Brown (2009b:1) have stressed, "Each burial in and of itself tells an individual story. When considered collectively, however, in combination with archival evidence, these burials enable us to reconstruct a forgotten community and reveal the centrality of a marginalized people." Until the archaeological discovery of the New York African Burial Ground and its analysis by the research team, representation of the site in New York history was minimal. The significance of the site to national and international histories was not recognized. Now, the site is understood to be highly significant on many levels. The African Burial Ground was arguably the first African American institution in New York City and perhaps the first African American institution in North America (Berlin 1998:62). With its rediscovery, the African Burial Ground continues to be a sacred place of central importance to African American heritage.

The New York African Burial Ground has proven to be highly significant to understanding the different contexts of slavery in the Atlantic World. For the most part, African Diaspora archaeology in the Americas focused on plantation contexts. Although many important studies have been conducted in plantation contexts (e.g., Ascher and Fairbanks 1971; Babson 1990; Epperson 1990; Fairbanks 1974, 1984; Farnsworth 2000; Otto 1975, 1980, 1984; Smith 1976, 1977), the overrepresentation of plantation contexts has provided a false impression about the contexts of enslavement. Northern and urban contexts are underrepresented, as are the immense contributions Africans and African Americans made to the development of New York City and the building of our nation. To Blakey, Rankin-Hill, Goodman, et al. (2009:273),

> the bones and teeth [of the individuals buried in the New York African Burial Ground] speak eloquently of their lives before death, bearing witness to the stresses of malnutrition, infection, poor medical care, lead pollution, overwork, and injury. Individuals came to New York via diverse routes and from diverse areas. Some were born into slavery, but most adults probably were not. Unfortunately, the hardships they endured rival those confronted by and imposed on any other group. Nevertheless, the enslaved Africans of New York rebelled, survived, endured, and literally made a significant portion of the world that is now enjoyed by much of humanity.

Investigation of the New York African Burial Ground has caused many difficult and controversial issues to be debated. Who owns the past? Who has a right to make decisions about how heritage sites are investigated? Who are the stakeholders and what are their roles and responsibilities? Who should study African Diaspora sites? How should African Diaspora sites be studied or interpreted? To whom are archaeologists ethically or professionally obligated? Finding the answers to all these difficult questions requires continuous debate.

Other questions involve how and to what degree the interests of descendant communities should dictate research questions and methodology. In the case of the New York African Burial Ground, the research team left it up to the descendant community to decide whether scientific analyses should be conducted or invasive techniques used. The descendant community approved both and also provided input on research questions, semantics, and interpretation. Diverse opinions and perspectives were expressed among members of the descendant community, however. Members of the descendant community were not in total agreement with each other, let alone with archaeologists (Mack and Blakey 2004). One can expect a plurality of opinions and perspectives to be the norm among descendant communities, so deciding which opinions or perspectives carry the most weight will

be important. The problem of factionalization among descendant communities also requires consideration (e.g., Baugher 2005).

Deciding who—descendant communities, archaeologists, or review boards—has the authority to make the final decisions is equally important. For some technical issues, only individuals with archaeological training will be capable of making informed decisions. For others, the opinions of individuals with an understanding of legal requirements or budgetary concerns might carry the most weight. When it comes to issues of dignity, respect, sensitivity, or cultural heritage, the opinions of descendant communities should be heavily weighted, but again, methods for weighing the plurality of opinions among segments of the descendant community, archaeologists, and contracting agencies need to be developed.

Important questions remain. How much authority should archaeologists relinquish? What kinds of decisions, if any, remain in the exclusive domain of archaeologists or stakeholders? Do archaeologists and stakeholders need to define formal roles in making decisions about archaeological research? Who is going to pay for consultations, and what are reasonable costs? Archaeologists and contracting organizations must be cognizant of the appropriate level of technical expertise that is necessary for the informed investigation of heritage sites, which includes the development of research designs, public engagement, investigative methods, data management, reporting, curation, and reinterment. Archaeologists, however, do not always have a complete understanding of the relevance of a site to stakeholders, the kinds of questions and concerns that are important to stakeholders, or the necessary familiarity with relevant historical information or intellectual traditions.

Brumfiel (2003:214; see also Ferguson 1996) has noted that since the passage of the NAGPRA, archaeologists working in the United States have increasingly acted as collaborators with descendant communities. This collaboration has seen archaeologists acting in a variety of roles, including as technicians, consultants, and equal partners (Brumfiel 2003). For studies of African American sites, collaborations "have required archaeologists to engage in new forms of activity including critical self-reflection (Franklin 1997a), popular writing (Gibb 1997), consulting local populations when designing research (LaRoche and Blakey 1997), and developing multivocal interpretations of archaeological remains (McDavid 1997)" (Brumfiel 2003:215).

For the African Burial Ground, the major research themes were decided through a process of public engagement. Clearly, the theoretical framework for the research was an outgrowth of intellectual traditions that were common to many of the Howard University researchers and some segments of the descendant community. The process of public engagement was not simply one of listening or informing, but of involved active discourse and negotiation. In some cases, segments of the descendant community demanded historical representations that could not be supported by material evidence, such as the idea that slavery did not exist in Africa. Archaeologists countered that their involvement as scholars required that scientific interpretations rely on material evidence (Blakey 2009b:44). Although there were substantial differences during the seventeenth and eighteenth centuries between slavery in the Americas and slavery in Africa (Inikori 1999), "our requirement as scholars was, nonetheless, to indicate that we would refer to slavery in Africa because of the material evidence for its existence there" (Blakey 2009b:44). Archaeologists were willing to adjust vocabulary and to consider alternate models of culture process, but they could not present information that they knew to be unsupported or factually incorrect.

The New York African Burial Ground Project has had a major impact on the discipline of archaeology. The project has had an even more profound impact on the interested public, particularly African Americans. The OPEI has collected many hundreds of newspaper articles, pamphlets, posters, and other media that document aspects of the New York African Burial Ground. These documents detail for public consumption the discovery, excavation, analysis, and interpretation of the site as well as the reburial of the individuals studied. Interpretation of the New York African Burial Ground is tremendously important to the public.

The New York African Burial Ground Project is also of great importance to archaeologists. The legacy of the New York African Burial Ground Project includes (1) the contributions of project findings to African Diaspora studies and African Diaspora archaeology as an important case study; (2) the pioneering and comprehensive engagement of the descendant community; (3) the empowerment of African American scholars and the promotion of African Diaspora perspectives; (4) a renewed emphasis on the need to increase archaeological research into the African Diaspora; (5) a recognition of the site's relationship to other African Diaspora sites, particularly those in

the Northeast, where the activities and contributions of Africans and their descendants have been largely overlooked; (6) contributions to understanding the social construction of racial ideologies and racialized political economies; and (7) the development of osteological, historical, and archaeological information on the diverse origins and life histories of individuals in the African Diaspora.

It must not be forgotten that the African Burial Ground is a sacred site with intense spiritual significance. Many individuals in the descendant community felt that excavation of the site was an act of desecration. The historical-period and modern interactions of Africans and African Americans with the site were inherently spiritual. During excavation, people flocked to the site to offer prayers and libations, to witness events, and to register how they or their ancestors were connected to the site, what the site meant to them and their ancestors, and what they would like to see happen in the future. Work at the site, the transfer of human remains to Howard University, and reinterment were accompanied by religious ceremonies performed by practitioners of Christianity, Islam, and Yoruba religions (Figure 114).

Figure 114. Egunfemi Adegbolola, Chief Alagba of New York, commemorating the ancestors in a Yoruba ceremony at the African Burial Ground (photograph by Dennis Seckler) (from Volume 2, Part 1 [Perry 2009:xviii].

The intense spiritual and historical significance of the site has meant that many aspects of the project have been tumultuous. As LaRoche and Blakey (1997:100) have suggested, "the excavation of our ancestors has been a cathartic and wrenching experience." The project has also inspired appreciation, understanding, and awareness among professionals and multiple publics. A tremendous amount of historical and scientific information has been amassed and evaluated. This information is important to understanding the past and present and for charting the future. Hopefully, the positive outcomes of the project have initiated a process of healing that has tangible social and political benefits. As LaRoche and Blakey (1997:100) have recognized, aspects of the project were deeply offensive and "provoked anger, outrage, and cynicism." At the same time, in the right hands, archaeology at sites like the New York African Burial Ground is for many African Americans "not an end in itself [but] a conduit, an avenue leading to spiritual rebirth and renewal of our history" (LaRoche and Blakey 1997:100).

Appendix A

NEW YORK AFRICAN BURIAL GROUND STEERING COMMITTEE MEMBERS

New York African Burial Ground Steering Committee Members

Howard Dodson, Chairperson	Schomburg Center for Research in Black Culture, New York Public Library
Peggy King Jorde, Executive Director	Mayor's Office/National Advisory Committee for the African Burial Ground
Robert McC. Adams	Secretary, Smithsonian Institution
Laurie Beckelman	Chair, NYC Landmarks Preservation Commission
J. Max Bond	Davis, Brody and Associates, Architect and Partner
Elombe Brath	Patrice Lumumba Coalition, Community Activist
Richard Brown	Representative, NYC African/American Community
Dr. John Henrik Clarke	Historian
Ron Conroy	Representative, NYC African Community
Rev. Susan Johnson Cook	Pastor, Mariner's Temple Baptist Church
Rev. Herbert Robert Daughtry	Pastor, House of the Lord Churches
Barbara J. Fife	Deputy Mayor for Planning and Development, NYC
Miriam B. Francis	Representative, NYC African/American Community
Raenice Goode	Representative, NYC African/American Community
Dr. Jerome S. Handler	Professor of Anthropology, Southern Illinois University
Rev. Dr. M. William Howard, Jr.	President, New York Theological Seminary
Robert Macdonald	Director, Museum of the City of New York
Mary Lacey Madison	Representative, NYC African/American Community
Joan Maynard	Executive Director, The Society for the Preservation of Weeksville and Bedford Stuyvesant History
Ollie McClean	Representative, NYC African/American Community
Christopher Moore	Journalist
Paul O'Dwyer	Attorney
Senator David Paterson	New York State Senate
Noel Pointer	Artists Coalition for the Preservation of the African/American Burial Ground
Carolyn Sherry	Representative, NYC African/American Community
Adunni Oshupa Tabasi	Representative, NYC African/American Community
Howard Wright	Representative, NYC African/American Community
Committee Alternates	
Claudine Brown	Smithsonian Institute
Roy Conroy	
Deidre Cross	Smithsonian Institute
Nancy Devine	Mayor's Office, NYC
Verna M. Francis	Representative, NYC African Community

New York African Burial Ground Steering Committee Members (*cont'd*)

Rev. Carolyn Holloway	Mariner's Temple Baptist Church
Wanda Mc Swain	O'Dwyer and Bernstein
Nan Rothschild	Anthropologist, Columbia University
Merin Urban	NYC Landmarks Preservation Commission
Charlene Dwin Vaughn	Advisory Counsel on Historic Preservation
Ex-Officio Committee Members	
Hon. Daniel P. Moynihan	U.S. Senate
Hon. John P. Hammerschmidt	U.S. House of Representatives
Hon. Bud Schuster	U.S. House of Representatives
Hon. John H. Chaffee	U.S. Senate
Hon. Alphonse D'Amato	U.S. Senate
Hon. Gus Savage	U.S. House of Representatives
Hon. Max Baucas	U.S. Senate
Hon. John J. Duncan Jr.	U.S. House of Representatives
Hon. James M. Inhofe	U.S. House of Representatives
Hon. Steve Symms	U.S. Senate
Hon. James A. Traficant	U.S. House of Representatives
Hon. Major R. Owens	U.S. House of Representatives
Hon. Norman Y. Mineta	U.S. House of Representatives
Hon. Carl M. Levin	U.S. Senate
Hon. Charles B. Rangel	U.S. House of Representatives
Hon. Jerrold Nadler	U.S. House of Representatives
Hon. Edolphus Towns	U.S. House of Representatives
Hon. Robert A. Roe	U.S. House of Representatives

Appendix B

BURIALS AT THE NEW YORK AFRICAN BURIAL GROUND, BY TEMPORAL GROUP

B.1. Early Group Burials

B.2. Middle Group Burials

B.3. Late-Middle Group Burials

B.4. Late Group Burials

Table B.1. Early Group Burials

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
18	adult	35	45	female?	93	81.5	12	y	tapered
23	adult	25	35	male	85	87.5	8	y	tapered
26[b]	subadult	8	12	undetermined	78	83	20	y	four sided
29	adult	35	45	male?	82	97.5	0	y	tapered
33	adult			undetermined	93	87.5	10	n	none (redeposited bones)
34	adult			undetermined		87.5	15	n	rectangular?
38	adult	12	18	female	90	86	10	y	tapered
44[b]	subadult	3	9	undetermined		85.5	21.5	y	four sided
48	adult			undetermined	97	87.5	20	y	tapered
52	undetermined			undetermined	18	87.5	25	n	rectangular
68	adult	21	25	male	87	91	3.5	y	tapered
72[b]	subadult	1	2	undetermined	90	87.5	34	y	rectangular
78	adult	16	19	undetermined	64	91	10	y	tapered
83[b]	subadult			undetermined	95	87.5	31	y	rectangular
84	adult	17	21	female	89	87.5	35	y	four sided
88	undetermined			undetermined	81	93.5	-4	n	unidentified
120	adult	25	34	female	93	88.5	70	y	tapered
121	subadult	2.5	4.5	undetermined	98	86	70	y	tapered
155	adult			undetermined	92	92	75	n	four sided
177	adult	30	60	undetermined	88	91.5	80	y	tapered
182	subadult	7.5	12.5	undetermined	102	94	69	y	tapered
200	adult			male	98	75.5	77	y	four sided
202	adult	12	18	female?	108	85.5	70	y	tapered
221	adult	30	60	male	96	83.5	77	y	tapered
226	infant	0	0.17	undetermined	105	83	77	y	tapered
227	undetermined			undetermined	96	77	84	n	four sided
237	undetermined			undetermined	183	80	55.5	n	four sided?
247[b]	adult	35	49.9	male?	90	84.5	90	n	unidentified
249[b]	subadult	0.67	1.33	undetermined	101	81	87	y	tapered
250	adult			undetermined	98	80.5	84	y	four sided
261	n/a			no skeletal remains		87.5	80	n	unidentified
263	subadult			undetermined	105	88.5	74	y	tapered

Table B.1. Early Group Burials *(cont'd)*

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
264	adult			undetermined		80	55	n	unidentified
272	subadult	0.25	0.75	undetermined	100	88.5	74.5	y	four sided
279	adult			undetermined	99	76.5	75.5	n	four sided
280	adult			female?	96	83	70	n	four sided
281	adult			male?	90	79.5	75	y	four sided
282	adult	32.5	42.5	male	96	77.5	71.5	y	four sided
307[b]	adult	45	55	male?	88	82.5	116	y	no coffin
308	subadult			undetermined	109	84.5	109	y	four sided
340	adult	39.3	64.4	female	94	88.5	237	y	tapered
361	adult	33	57	male	85	88.5	249	y	tapered
382[b]	subadult	4	5	undetermined	110	71.5	215	y	four sided
387	adult	34	44	male	109	78	227	y	tapered
388	adult	29	57	female	112	75.5	222	y	tapered
389	adult			female	100	82	220	y	tapered
402	adult			undetermined	100	84.5	235	n	tapered
404[b]	adult			female	96	79.5	165	n	tapered
416	adult			undetermined	101	71.5	142	y (no cranium)	tapered
426	undetermined			undetermined		69.5	141	n (not excavated)	tapered?
432	adult			undetermined	90	78	220	y	rectangular?

Note: From Volume 2, Part 1 (Perry, Howson, and Holl 2009a:Table 23).
[a] In the Sex column, a question mark indicates a probable assignment.
[b] Indicates a problematic temporal assignment.

Table B.2. Middle Group Burials

Burial No.	Age Category	Low Age	High Age	Sex [a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
3	adult	25	35	male		107	2	n	n/a
8	infant	0	0.5	undetermined	101	82.5	5	y	hexagonal
9	adult	35	45	male	90	89.5	25	y	hexagonal
16	adult	50	60	female	67	107	0	y	hexagonal
17	subadult	4	6	undetermined	89	83.25	20	y	hexagonal
19	subadult			undetermined	108	81.5	20	y	unidentified
21	subadult			undetermined		87.5	20	n	rectangular
22	subadult	2.5	4.5	undetermined	90	96.5	-1.5	y	unidentified
24	subadult	3	6	undetermined	92	87.5	5	y	rectangular
25	adult	20	24	female	96	87.5	20	y	unidentified
27	subadult	1.4	2.8	undetermined	74	88.5	5	y	hexagonal
30	subadult	7	11	undetermined	92	86	10	y	hexagonal
31	adult	14	16	undetermined	90	103.5	-1	y	hexagonal
32	adult	50	60	male	100	86.5	23.5	y	hexagonal?
35	subadult	8	10	undetermined	93	87.5	15	y	hexagonal
39	subadult	5	7	undetermined	82	81.75	40	y	hexagonal
41	adult			undetermined	66	99.5	-11	n	unidentified
45	subadult	2.5	4.5	undetermined	86	103.5	-5	y	hexagonal
46	adult			female?	86	95.5	0	y	unidentified
47	adult	35	45	male	94	103.5	0	y	hexagonal?
49	adult	40	50	female	82	87.5	40	y	hexagonal
50	subadult			undetermined	90	87.5	30	y	hexagonal
53	subadult	0.25	0.75	undetermined	90	87.5	0	y	hexagonal
55	subadult	3	5	undetermined	93	92.2	0	y	hexagonal
56	adult	30	34	female	90	90.5	15	y	hexagonal?
57	subadult	0.88	2.16	undetermined	90	87.5	25	y	hexagonal
66	infant	0	0.16	undetermined	90	93.5	25	y	unidentified
69	adult	30	60	male	82	89	-3.5	y (no cranium)	hexagonal?
70	adult	35	45	male	90	92.5	10	y (no cranium)	hexagonal
73	adult	20	30	female?	96	79	10	y	hexagonal
74					97	80	15	n (empty coffin)	hexagonal
75	infant	0	0	undetermined	97	92.5	34	y	rectangular
77	subadult	0.67	1.3	undetermined	110	88.5	35	y	hexagonal

Table B.2. Middle Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
79	subadult	0.25	0.75	undetermined	90	82	6	y	tapered
80	subadult			undetermined	88	87.5	40	y	hexagonal
81	adult			female	90	93	-3	y (no cranium)	unidentified
82	adult	18	25	female	86	93	3	y (cranium only)	unidentified
85	subadult	0.25	0.75	undetermined	89	80.5	15	y	hexagonal
87	subadult	4	6	undetermined	90	94	3	y (cranium only)	unidentified
90	adult	35	40	female	90	81.5	4	y	hexagonal
93	adult			undetermined		85	-3	n	unidentified
94	subadult			undetermined	80	92.5	47	y	hexagonal
96	adult	16	18	male	71	94.5	47	y	hexagonal
98	subadult	1	2	undetermined	90	81	20	y	hexagonal
100	subadult			undetermined	90	80.5	20	y	hexagonal
102	subadult	1.33	2.67	undetermined	90	79.5	20	y	hexagonal
103	subadult			undetermined	86	79.5	20	y	hexagonal
104	adult	30	40	female	77	89.5	61	y	hexagonal
111	subadult	0.67	1.33	undetermined	73	91.5	53	y	four sided?
112	subadult	0.25	0.75	undetermined		89	82.5	y	unidentified
113	adult			undetermined	85	91.5	60	y	unidentified
114	adult	45	50	male	100	94.5	91	y	hexagonal
115	adult	25	35	female	94	89.5	89	y	hexagonal
116	adult	45	55	male	100	95.5	81.5	y	hexagonal
118	adult			undetermined		94.5	55	n	unidentified
122	adult	18	20	female	86	93	61	y	hexagonal
126	subadult	3.5	5.5	undetermined	110	88	80.5	y	hexagonal
127	subadult	0.67	1.33	undetermined	94	90	95	y	hexagonal
128	infant	0	0.17	undetermined	89	92.5	83	y	hexagonal
129				n/a	97	91.5	95	no (empty coffin)	unidentified
130	subadult	1	2	undetermined	89	92	56	y	hexagonal
133	subadult	1	2	undetermined	76	96	78	y	hexagonal
136	subadult			undetermined		95	86.7	y	unidentified
142	adult	25	30	female	95	88	90	y	hexagonal
143	subadult	6	10	undetermined	111	88	80.5	y	hexagonal
144	infant	0	0.17	undetermined	99	88	90	y	four sided

Table B.2. Middle Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
148	adult	12	18	undetermined	93	91.5	70	y	hexagonal
149	subadult	0.5	1	undetermined	97	88	90	y	four sided
154	adult	25	29	female	88	95.5	75	y	hexagonal
156	adult	30	60	female		66.5	115	y	unidentified
159	adult	25	35	female	89	73.5	90	y	hexagonal
160	subadult	3.5	5.5	undetermined	93	73	98.5	y	four sided
161	subadult			undetermined	83	74.5	90	y	rectangular
163	adult	18	24	male?	89	74.5	99	y	hexagonal
167	subadult	8.5	12.5	undetermined	99	86.5	65	y	hexagonal
169	subadult	5.5	9.5	undetermined	114	91.5	81	y	hexagonal?
175	adult	24	28	male		72	64.5	n	unidentified
189	adult			undetermined	90	95.5	65.5	n	unidentified
206	subadult			undetermined		75.5	93	y	rectangular
212	subadult	4.5	5.5	undetermined	85	82.5	55	y (no cranium)	hexagonal?
213	adult	45	55	female	93	84.5	85.5	y	hexagonal
215	infant	0	0.16	undetermined	111	81.5	72.5	y	four sided?
218	subadult	0.5	3.5	undetermined	105	89	73	y	unidentified
220	subadult			undetermined	95	78	92	y	tapered
224	subadult	0.5	1.33	undetermined	86	77.5	97	y	four sided
231	subadult			undetermined		77.5	97	y	four sided
232	subadult			undetermined		77.5	97	y	unidentified
233				n/a	90	73	127	n	rectangular
234	infant	0	0.5	undetermined	107	77.5	96.5	y	tapered
239	subadult	1.5	3.5	undetermined	109	83.5	70	y	tapered
240	subadult	0.88	2.66	undetermined	90	79.5	95.5	y	hexagonal?
245	subadult	2.5	4.5	undetermined	93	75	85.5	y	hexagonal
246	subadult	0.5	2.9	undetermined	92	82.5	70	y	four sided
248	subadult	14	15	undetermined	90	71.2	118.5	n	unidentified
254	subadult	3.5	5.5	undetermined	96	79.5	97.5	y	unidentified
255	infant	0	0.17	undetermined	90	79.3	117.9	y	hexagonal?
256	adult	40	60	male	93	77.5	79	y	hexagonal
258	infant	0	0.5	undetermined	104	85.5	78	y	four sided
260	undetermined			undetermined	94	84.5	53.5	n	n/a
265	subadult	0.5	1	undetermined	95	82	120	y	hexagonal?
268	infant	0	0.5	undetermined	96	74.5	125.5	y	hexagonal?

Table B.2. Middle Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
270	adult			male	97	84.5	123.5	y	unidentified
271	adult	45	57	male	103	76.5	65	y	hexagonal
275	adult			female?	96	81	50	n	unidentified
277	subadult			undetermined	92	77.5	51	n	unidentified
283	subadult	0.33	0.67	undetermined	104	76	123	y	hexagonal
284	adult	21	28	male	86	80.5	115.5	y	unidentified
285	adult	20	30	female	102	80.5	64	y	hexagonal
286	subadult	4.4	8.5	undetermined	89	75	126	y	hexagonal?
287	adult	18	20	male	95	73.5	53	y (no cranium)	unidentified
288	adult			undetermined		74.5	120	n	n/a
291	subadult	3	5	undetermined		82.5	94	n	n/a
292	adult			undetermined		72.5	121	n	unidentified
293	adult			male?	106	82.5	94	n	hexagonal
294	subadult	0.5	1	undetermined	96	88	86.5	y	hexagonal
295	adult	30	50	female	110	82	70	y	hexagonal
296	infant	0.5	2.9	undetermined	68	84	98	n	unidentified
298	subadult	0.67	1.33	undetermined		66.5	123	n	unidentified
300	infant			undetermined	106	76	125.5	y	hexagonal?
301	adult			undetermined	99	86	100.5	n	n/a
301A	undetermined			undetermined		86	100.5	n	n/a
302	adult			female?	99	88.5	99.5	n	n/a
303	subadult	0.5	1	undetermined	100	73.5	76.5	n	n/a
304	subadult	3	5	undetermined	90	81.5	109	y	tapered
306	adult	28	44	male	88	76.5	125	y	hexagonal
310	adult	44	52	female	99	75.5	60	y	hexagonal
312	infant	0	0.3	undetermined	94	75	67	y	rectangular
315	adult	30	40	female	88	83	127	y	hexagonal?
318	subadult	7.5	14	undetermined	116	78	144	n	n/a
320	subadult	2	4	undetermined	120	90	251.5	y	unidentified
321	subadult	1	2	undetermined	117	79.5	143	y	hexagonal
324	adult	25	35	female	90	69	132	y	hexagonal
326	adult	45	55	male	96	73.5	135	y	hexagonal
328	adult	40	50	female	88	84.5	241	y	hexagonal
334	subadult			undetermined	111	89	251	y	unidentified
335	adult	25	35	female	127	84.5	248	y	hexagonal

Table B.2. Middle Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
336	subadult	0.5	1	undetermined	92	83	125.5	y	hexagonal?
339	subadult			undetermined	86	83	123	n	unidentified
341	adult			male	103	87.5	229.5	y	hexagonal
344	adult	25	35	male?		87.5	255	n	unidentified
345	adult			undetermined		74.5	254	n	n/a
347	subadult	0.5	1	undetermined	98	73.5	130	y	hexagonal
348	subadult	1	2	undetermined	112	66	138	y	hexagonal
349	infant	0	0.5	undetermined	94	72	132	y	unidentified
350	undetermined			undetermined		82	133.5	n	n/a
351	adult	50	60	male	106	84.5	145	y	hexagonal
353	adult	24	34	male	112	84.5	230	y	hexagonal
355	adult			undetermined		74.5	235	n	n/a
356	subadult			undetermined	128	84.5	248	y	shared
358	adult			female?	126	89.5	230	n	unidentified
359	subadult			undetermined	95	84.5	127.5	n	unidentified
360	subadult			undetermined		75.5	235	y	unidentified
365	adult			female	195	79.5	257.5	n	unidentified
366	adult	34	62	undetermined	118	78	224	y	hexagonal
367	adult	25	35	female?		72	130	n	n/a
368	subadult	10.5	13.5	undetermined	95	80.5	246.5	y	unidentified
370	subadult	2	4	undetermined	75	82	146.5	y	hexagonal?
371	adult	25	35	female	115	69	235	y	no coffin
372	adult	25	35	female		81	235	n	n/a
374	infant	0	0.25	undetermined	93	72	132.5	y	unidentified
375	adult	16	18	female	120	74.5	253	y	no coffin
378	undetermined			undetermined		75.5	235	n (not excavated)	unidentified
379	adult	30	40	male	109	71.5	215	y	hexagonal
380	adult	40	60	male	98	85	241	y	hexagonal
383	adult	14	18	female		79	245	y	hexagonal
384	adult	25	45	female	80	91.5	248	y	hexagonal
385	adult	40	60	female	121	86	251.5	y	hexagonal
390	adult	25	35	male	94	71.5	140	n	n/a
393	infant	- 0.17	0.17	undetermined	119	84	211	y	hexagonal?
394	adult	16	25	undetermined		59.5	185	n	n/a
396	subadult	6.5	8.5	undetermined	108	82.5	224	y	hexagonal

Table B.2. Middle Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
397	adult	30	40	female	100	87	229	y	hexagonal
398	adult	25	35	undetermined		93	255.5	n	n/a
399	infant	0	0.3	undetermined	106	78	213	y	rectangular
400	adult	25	35	male	85	65.5	130	y	hexagonal
403	adult	39	65	male	113	93	255.5	n	unidentified
405	subadult	6	10	undetermined	119	83.9	211.8	y	hexagonal?
406	infant	0	0.5	undetermined	280	68.25	253.5	y	hexagonal?
408	adult			male?		79.5	158	n/a	n/a
410	adult			female	95	69.5	178	y	hexagonal
412	infant	0	0	undetermined		78.5	218.5	y	unidentified
414	adult	39	59	male	112	74	165	y	unidentified
415	adult	35	55	male	99	81	215	y	hexagonal
417	subadult	9.5	14.5	undetermined		64.5	165	y	unidentified
418	adult	30	55	male	106	64.5	163	y	unidentified
419	adult	48	62	male	117	71.5	206.5	y	hexagonal
420	adult	35	45	male		69.5	186.5	n	n/a
422	undetermined			undetermined		86.5	212.5	n	unidentified
423				n/a		67	162	n (not excavated)	unidentified
424	adult			undetermined		76	220	n/a	n/a
425	adult			female	107	79.1	253	n (not excavated)	hexagonal
427	adult	16	20	male?	91	69.5	179	y	hexagonal
428	adult	40	70	female	95	66.5	147.5	y	unidentified
429	adult			undetermined		64.5	215	n (not excavated)	unidentified
430				n/a		84.5	215	n (not excavated)	unidentified
431	adult			undetermined		79.5	162	n	unidentified
433	adult			undetermined		79.5	160.5	n	n/a
434	undetermined			undetermined		79.5	155	n	no coffin

Note: From Volume 2, Part 1 (Perry, Howson, and Holl 2009b:Table 25).
[a] In the Sex column, a question mark indicates a probable assignment.

Table B.3. Late-Middle Group Burials

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
4	adult	30	40	male		86.5	11	n	n/a
4A	adult	20	25	male?		86.5	11	n	n/a
5	subadult	0.5	1	undetermined	90	86.5	9	y	unidentified
7	subadult	3	5	undetermined	105	80.5	15	y	hexagonal
10	adult	40	45	male	88	82.5	20	y	hexagonal
11	adult	30	40	male?	90	83.5	12	y	hexagonal
13/43	subadult	2.5	4.5	undetermined	90	105	-7	y	four sided?
42	infant	0	2	undetermined	76	91.5	45	y	hexagonal
54	adult			undetermined	90	92	-4	n	unidentified
60	subadult	0.25	0.75	undetermined	95	93.5	0	y	four sided?
61	undetermined			undetermined	82	87.5	45	n	unidentified
64	subadult	0.38	0.88	undetermined	82	92.5	45	y	hexagonal
67	adult	40	50	male	88	94	0	y (no cranium)	unidentified
89	adult	50	60	female	92	90.5	48	y	hexagonal
91	subadult	0.67	1.3	undetermined	84	95	48	y	hexagonal
101	adult	26	35	male	78	88.5	49	y	hexagonal
105	adult	35	45	male	89	95	60	y	hexagonal
106	adult	25	35	female?	92	90.5	71	y	hexagonal
107	adult	35	40	female	93	90	48	y	hexagonal
108	subadult	0.25	0.75	undetermined	68	87	53	y	hexagonal
109	subadult	0.67	1.33	undetermined	126	90.5	54	y	hexagonal
119	adult	35	45	male	93	88.5	72	y	hexagonal
123	subadult	0.67	1.33	undetermined	96	89.5	80	y	hexagonal?
145				n/a	95	73.5	74	n (empty coffin)	hexagonal
146	infant	0	0	undetermined	102	73.5	74.5	y	hexagonal
168	adult			male	90	95.5	68.5	n	n/a
176	adult	20	24	male	103	74.5	65.5	y	hexagonal
198	subadult			undetermined	113	86.5	80	y	four-sided
216	infant	0	0.16	undetermined	104	78.5	57	y	rectangular
219	subadult	4	5	undetermined	87	71.5	122	y	unidentified
222	adult			male?	95	76.5	118	y (no cranium)	hexagonal
229	subadult	6.75	11.25	undetermined	108	83.5	72	y	unidentified

Table B.3. Late-Middle Group Burials *(cont'd)*

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
235	adult	28	42	female	85	71.5	123	y	hexagonal
238	adult	40	50	male	102	78.5	62	y	hexagonal
251	subadult	12	14	undetermined	101	79.5	79	y	hexagonal
253	subadult	13	15	undetermined	96	82.5	65.5	y	hexagonal
267	adult			undetermined	105	82.5	94	y	hexagonal
289	subadult	5	9	undetermined	89	81	125	y	tapered
290	adult	45	55	male	89	84	114	y	hexagonal
311	subadult	0.25	0.75	undetermined	100	88.5	99.5	y	tapered
314	adult	40	50	male	97	82	134	y	hexagonal
316	adult	18	20	female	95	88.5	99.5	y	hexagonal
317	adult	19	39	male?		91.5	220	n	unidentified
319	adult			female		88.5	249	n	unidentified
332	adult	35	40	male?	92	80.5	126	y	hexagonal
333	adult	45	55	male	121	81.5	230.5	y	rectangular
338	adult	33	65	female	92	84.5	133.5	y	hexagonal
352	adult			male	100	67.5	131	y	hexagonal
357	adult	45	65	male	109	72	228.5	y	no coffin
362	adult			undetermined	119	69.5	235	y (cranium only)	unidentified
373	adult	45	60	female	100	70.5	132	y	hexagonal
376	adult	45	65	male	98	77	134.5	y	hexagonal
377	adult	32.6	57.8	female	103	75.5	235	y	no coffin
381	undetermined			undetermined		75.5	235	n (not excavated)	n/a
391	adult	16.5	19.5	male	90	68	140.5	y	no coffin
392	adult	42.5	52.5	male		71.5	140	y	rectangular
395	adult	43	53	male	107	76.5	135.5	y	hexagonal
413	adult	50	70	female	95	62.5	175.5	y	hexagonal

Note: From Volume 2, Part 1 (Perry, Howson, and Holl 2009c:Table 27).
[a] In the Sex column, a question mark indicates a probable assignment.

Table B.4. Late Group Burials

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
1	adult	20	25	female?	94	82.5	2	y	hexagonal
2	adult	27	42	male		43.5	11	n	n/a
6	adult	25	30	male?	91	87.5	15	y	hexagonal
12	adult	35	45	female	83	89.5	12	y	rectangular?
14	infant	0	0.5	undetermined	89	89.5	12	y	rectangular
15	subadult	11	18	undetermined	105	103.5	-5	n	unidentified
20	adult	45	50	male		85	0	n	no coffin
28	subadult			undetermined		83	-2	y	unidentified
36	adult			female		87.5	-5	n	unidentified
37	adult	45	55	male	102	65	20	y	hexagonal
40	adult	50	60	female	94	65	10	y	hexagonal
51	adult	24	32	female	118	75	10	y	hexagonal
58	subadult	3.5	4.5	undetermined	93	65	15	y	rectangular
59	infant	0	0.25	undetermined	90	65	15	y	hexagonal
63	adult	35	45	male	91	70	15	y	hexagonal
65	infant	0	0.49	undetermined	90	75	10	y	hexagonal?
71	adult	25	35	female	102	75	10	y	hexagonal
76	adult	25	55	male	112	75	10	y	no coffin
86	subadult	6	8	undetermined	91	74	18	y	hexagonal
95	subadult	7	12	undetermined	76	94.5	51	y	hexagonal
97	adult	40	50	male	97	81	20	y	hexagonal
99	subadult	6	10	undetermined	78	91.5	70	y	unidentified
117	infant	0	0	undetermined		91.5	77	n/a	n/a
125	adult			female?	89	64.5	52	n	unidentified
131	subadult			undetermined	90	91.5	76.5	n	unidentified
132	adult	25	30	male	98	64.5	61.5	y	hexagonal
134	adult	40	50	female	106	62.5	85	y	hexagonal
135	adult	30	40	male	100	70	70	y	hexagonal
137	adult	25	35	undetermined	100	63	75	y	unidentified
138	subadult	3	5	undetermined	98	67.5	86	y	rectangular
147	adult	55	65	male	81	70.5	56.5	y	hexagonal
150	adult	20	28	female	117	70.5	80	y	no coffin
151	adult	35	45	male	138	67.5	83	y	hexagonal
152	undetermined			undetermined	110	55.5	67	n	unidentified
153	adult			female?	111	54.5	74	y	hexagonal

Table B.4. Late Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
157	adult			female?		53.5	81.5	n	n/a
158	adult	20	30	male	111	63	92	y	no coffin
162	adult	35	45	male	109	55	51.5	n	unidentified
164	subadult	8	13	undetermined	97	52.5	91	y	tapered
165	adult			undetermined	108	62.5	73	y	no coffin
166	subadult	0.5	1	undetermined	111	55.5	92.5	y	rectangular
170	subadult	7	11	undetermined	90	96	65	y (no cranium)	unidentified
171	adult	44	60	male	114	53.5	99.5	y	hexagonal
172	adult	25	35	female	118	40.5	88	y	no coffin
173	subadult	0.25	0.75	undetermined	121	57	101	y	rectangular
174	adult	17	18	male	115	60.5	90	y	hexagonal
178	adult			male		62	57	n	n/a
179	adult	25	30	male	110	46.5	98	y	hexagonal
180	subadult	11	13	undetermined	111	50	97.5	y	hexagonal
181	adult	20	23	male	86	66	115	y	no coffin
183	subadult	0.63	1.13	undetermined		50	113.5	y	hexagonal
184	subadult	1	1.5	undetermined	121	52	108.5	y	four sided
185	adult	21	23	male		54.5	122	y	no coffin
186	infant	0	0.17	undetermined	124	47.5	110	y	hexagonal
187	subadult	1.5	4	undetermined	112	52.5	119.5	y	hexagonal
188	adult	26	32	undetermined	95	58.5	52.5	n	n/a
190	subadult	0.38	0.88	undetermined	112	55	100.5	y	hexagonal
191	adult	25	30	male	109	56.5	87.5	y	no coffin
192	adult	40	60	female	116	67	101.5	y	hexagonal
193	adult	30	48	male	109	65.5	101.5	y	no coffin
194	adult	30	40	male	104	50.5	84	y	hexagonal
195	adult	30	40	female	100	81.5	63	y	hexagonal
196	adult	20	24	undetermined	90	83	56	y	hexagonal
197	adult	45	55	female	77	76	57.5	y	hexagonal
199	adult	30	40	female	112	73.5	80	y	no coffin
201	subadult	1.5	3.5	undetermined	101	59.5	70.5	y	rectangular
203	adult	12	18	undetermined	83	59	77	y	hexagonal
204	adult			female?		77.5	98	n	n/a
205	adult	18	20	female	108	59.5	102	y	hexagonal

Table B.4. Late Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
207	adult	25	35	female?	93	78.5	95	y	tapered
208	subadult	0.5	1	undetermined		77	96	n	unidentified
209	adult	40	50	male	117	42	94	y	hexagonal
210	adult	35	45	male	88	46	116	y	no coffin
211	adult			male?	95	77	79.5	y	no coffin
214	adult	45	55	male	99	79.5	63.5	y	hexagonal
217	adult	17	19	male	100	64.5	122.5	y	hexagonal
223	adult	25	35	female	101	66.5	76.5	y	no coffin
225	subadult	0.5	1.25	undetermined	112	64.5	95.5	y	four sided
228	adult			male?	85	86	55	n	hexagonal
230	adult	55	65	female	120	45.5	106	y	hexagonal
236	subadult	4	5	undetermined	90	84.5	53.5	y	hexagonal
241	adult	55	65	female	94	54.5	121	y	hexagonal
242	adult	40	50	female	90	49.5	117	y	hexagonal
243	adult	40	50	male	105	57.5	121	y	no coffin
244	subadult	5	9	undetermined	104	51.5	90	y	unidentified
252	subadult	1	2	undetermined	115	64.5	95.5	y	hexagonal
257	adult	30	40	male	100	72.1	64.5	y	other
259	adult	17	19	female?	105	40.5	102	y	hexagonal
262	adult	15	17	male?	94	38.5	120	y	no coffin
266	adult	25	35	female	105	38.5	113.5	y	hexagonal
276	adult	20	24	female	108	35.5	118.5	y	no coffin
278	adult	45	55	male	116	42	103	y	no coffin
297	adult	30	40	male	106	62.5	117.5	n	unidentified
299	adult	40	50	male	80	68.5	123.5	y	hexagonal
305	infant	-0.33	0.33	undetermined	109	57	122	y	hexagonal
309	adult	20	25	male		62	143.5	y	no coffin
313	adult	45	55	male	102	31.5	114.5	y	hexagonal
322	adult			female	99	64.5	140	n	n/a
323	adult	19	30	male		45	128.5	y	no coffin
325	adult	25	35	male	99	63.5	137.5	y	hexagonal
327	adult	35	45	male	98	48.5	129	y	no coffin
329	adult			male	85	56	128.5	y	no coffin
329.1	adult			undetermined		56	128.5	n	n/a

Table B.4. Late Group Burials (*cont'd*)

Burial No.	Age Category	Low Age	High Age	Sex[a]	Head Angle (degrees)	Grid South (feet)	Grid East (feet)	Preservation Code	Coffin
330	adult	28	58	male		58.5	140	n	n/a
331	adult	30	35	undetermined		58	137	n	n/a
337	adult	40	50	male	116	37	130	y	no coffin
342	adult	25	35	female?	104	50	129	y	hexagonal
343	adult	19	23	male	92	59.5	130	y	hexagonal
346	adult	50	70	female	117	57.5	138.5	y	hexagonal
354	adult	35	45	male	93	44.5	129.5	y	hexagonal
363	subadult	1	2	undetermined	124	49.5	135	y	hexagonal
364	adult	25	35	male	90	44.5	143.5	y	no coffin
369	adult	40	50	male	83	54	131	y	no coffin
386	infant	0	0.3	undetermined	101	48	121.5	y	unidentified

Note: From Volume 2, Part 1 (Perry, Howson, and Holl 2009d:Table 29).
[a] In the Sex column, a question mark indicates a probable assignment.

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